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The Reform of Fiscal Systems in Developing and Emerging Market Economies

A Federalism Perspective

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A framework for allocating taxing and spending responsibilities to various levels of government and for designing fiscal transfers to foster decentralized decisionmaking while preserving or even enhancing equity and efficiency goals.



Summary findings

Boadway, Roberts, and Shah review experiences with fiscal federalism in industrial countries and present a framework for a reform of fiscal systems in developing and transition economies. They indicate how the benefits of decentralized decisionmaking in a federal system can be achieved in a manner consistent with the objectives of national efficiency and equity. Among their suggestions:

- Decentralization can be made compatible with national objectives through conditional grants, regulation, or coordinated decisionmaking.
- The federal government should assume primary responsibility for providing national public goods and services, for efficiency of the internal common market, for redistributive equity, for external relations, and for macroeconomic policy.
- State governments should be responsible for subnational public goods and services, for the delivery of quasi-private goods and services (such as education, health, and social insurance), for fiscal equity among municipalities, and for overseeing local government decisionmaking. Local governments should be responsible for purely local services.
- Where jurisdiction for a public service is shared, the roles of the various levels of government should be clarified.
- Accountability should be hierarchical, with the federal government responsible for overall policy and standards, and lower levels of government with the actual delivery of services and infrastructure. In some cases, asymmetric decentralization may be the preferred option, especially where jurisdictions differ greatly in size and population.
- Efficiency and equity must be considered in assigning taxes. Efficiency considerations suggest centralizing taxes applied on more mobile bases (such as taxes on capital income and on trade). Equity considerations suggest centralizing progressive income taxes and transfers to persons as well as taxes on wealth

and wealth transfer and on resource rents.

- States could use excise taxes or general sales taxes if levied on a single-stage basis; if a multistage sales tax is used, it is best administered centrally. States could also obtain revenues from piggy-backing on the federal income tax provided a harmonized system is maintained. Municipalities should use property taxes, user fees, and licenses.
- Tax and expenditures assignment must be supplemented by a system of fiscal transfers, both because the desirability of greater decentralization of expenditures than of taxes will give rise to fiscal imbalances and because transfers are a necessary instrument for achieving efficiency and equity in a decentralized federation.
- In a decentralized federation, fiscal inefficiencies and fiscal inequities will occur because states will not deliver comparable sets of services at comparable tax rates. Eliminating these differential net fiscal benefits requires a set of equalizing unconditional transfers, possibly combined with a more general revenue-sharing scheme.
- Matching conditional grants are useful for internalizing the spillover of benefits from state public spending to residents of neighboring states. More important is the use of federal-state conditional grants as a means for the federal government to achieve national efficiency and equity objectives while allowing public service delivery to be decentralized.
- In transition economies, framework laws on property rights, corporate legal ownership and control, bankruptcy, and financial accounting and control are not fully developed. This should be a high priority. The lack of local administrative experience, institutions, and competence should not be used as an excuse for not decentralizing responsibilities. If necessary, transitional funding and training should be provided.

This paper—a product of the Public Economics Division, Policy Research Department—is part of a larger effort in the department to reform intergovernmental fiscal relations in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Carlin Jones, room N10-063, extension 37754 (67 pages), February 1994.

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and Emerging Market Economies:**

A Federalism Perspective

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I. INTRODUCTION

The merits of decentralized decision making in the private sector have become well widely accepted. Decentralization induces competitive behavior among firms thereby improving economic efficiency. As well, decentralization improves technical efficiency both by reducing administrative overheads and by allowing information to be used more effectively. It allows for more innovation and enables decisions to be made by those closest to the ultimate users of the products of the economy. It also improves efficiency within firms by reducing monitoring and agency costs, and enhancing productive effort.

At the same time, there are limits to the extent of decentralization that is possible or desirable in the private sector. Economies of scale can be important in various dimensions and in various sectors. The least-cost output in some sectors may require large amounts of capital, as in transportation and utilities. Network and information economies might be important in some sectors, such as communications. Sectors for which research and development or risk sharing are important may benefit from scale economies. In the end, the advantages of decentralization must be set against those of scale in determining the optimal size of firms in various sectors and the optimal structure of decision making within firms.

Similar issues arise in the public sector. There are advantages and disadvantages of decentralizing the various functions of government from higher levels to lower levels. The literature on fiscal federalism is devoted in large part to analyzing the consequences of varying degrees and forms of decentralizing and to suggesting the desirable extent of decentralization in various contexts. Much of the literature draws on the practice and circumstances in industrialized countries, where federal systems of economic decision making have evolved over a longer period of time. One of the main purposes of this paper is to review some of the elements of the literature on fiscal federalism that have been developed in the context of industrialized countries and to judge how they apply to the setting of developing countries where, by and large, decision making has been much more centralized.

The analog with decentralization in the private sector is, of course, only an im-

perfect one. The sorts of economic decisions that the public sector undertakes are much different than those of the private sector. Private sector firms are typically interested in maximizing profits from the sale of goods and services. The public sector, on the other hand, engages largely in non-market activities. Broadly speaking, this involves two sorts of things — the provision of goods and services (usually free of charge), and the making of transfer payments to the private sector. Some of the goods and services provided by the public sector are 'public' in the economic sense, but many are of a private nature. We shall use the term *quasi-private* to refer to goods provided by the public sector which are private in nature. Though some revenues are obtained in the public sector by charges or user fees for goods and services provided, the bulk of the revenue comes from taxation of one form or another. A key difference between the public sector and the private sector concerns the objectives used for economic decision making. Those used in the public sector may include the traditional normative ones of economic efficiency and redistributive equity, as well as the positive ones of maximizing political or electoral support and responding to the influence of bureaucrats and pressure groups.

Whatever the motivating forces guiding public sector decision making might be, there are still advantages to be weighed against disadvantages from decentralizing decision making to lower levels of government. Part of the purpose of this paper will be to outline what those advantages and disadvantages might be, and to discuss alternative ways in which the desired degree of decentralization has been and can be achieved in practice. The degree and form of decentralization of various tax and expenditure decisions depends upon the political, economic and institutional characteristics of the country in question, as well as on the role that governments actually assume. This is of special importance in the context of considering decentralization in developing countries, since their features are somewhat different than those found in industrialized countries, where considerable decentralization has often been the practice.

We proceed with a review of the principles of fiscal federalism as they have evolved in the context of industrialized countries. Next we discuss the way in which multi-level fiscal affairs have tended to be organized in developing countries. Finally, we offer our observations about some desirable directions for change. Our overall objective is to indicate how the benefits of decentralized decision making within a federation may be achieved without sacrificing the advantages of achieving basic national efficiency and equity objectives, or even sometimes by contributing to them.

II. A REVIEW OF THE PRINCIPLES OF FISCAL FEDERALISM

It is useful to begin with a summary of the relevant theory of fiscal federalism as it has been developed in the economics literature. Much of it has evolved in the context of industrialized countries, since it is in these countries that institutions of federalism have been most firmly established. However, many of the principles are of more general applicability.¹

Fiscal federalism is concerned with economic decision making in federal systems of government, that is, in systems of government in which public sector decisions can be taken at various levels of government. The overriding issue in fiscal federalism is referred to as the *assignment problem*, that is, the assignment of taxation, expenditure and regulatory responsibilities to various levels of government. The key issue here concerns the optimal degree of decentralization of public sector decisions of different sorts. The assignment of functions is, of course, conditional on the sorts of roles undertaken by the public sector and also on the objectives of government intervention in the first place. We begin this section with a discussion of the role of governments in a market economy generally, and the special problems for government that arise in a federal economy.

Next, we turn to the assignment of functions. The benefits and costs of decentralization are outlined, both for the expenditure and for the tax side of the public sector budget. Decentralization can take varying forms ranging from assigning exclusive jurisdiction for a given function to a given level of government to situations of co-occupied jurisdictions in which one level of government is able to influence the decisions taken by the other in varying degrees through mechanisms such as regulation, the power to override decisions or financial intervention. To some extent, the amount of decentralization on the expenditure side can be determined independently of that on the tax side.

The way in which the assignment function is resolved then determines the sort of fiscal relations that should exist between levels of government. *Intergovernmental fiscal relations* include the structure of transfers between levels of government, the division of the tax room, and any requirement for one level of government to assert influence over the decisions taken by another by financial means. The decentralization of functions also gives rise to both the desire and the opportunity for different governments to coordinate or harmonize their policies. Such coordination can occur horizontally among governments at the same level, or vertically

¹ The classic references to fiscal federalism are Musgrave (1959) and Oates (1972). More recent treatments include Breton and Scott (1978), Boadway and Wildasin (1984), Wildasin (1986) and Boadway (1992).

between governments at different levels. The final part of this section discusses intergovernmental fiscal relations including mechanisms for the harmonization of policies.

1. Government Intervention in a Market Economy

The merits of leaving economic decisions to the private sector in a market economy are well recognized. The decentralized nature of these decisions and the competitive setting in which they are taken both contribute to efficiency in resource allocation. From this point of view, a necessary condition for government intervention must be some form of market failure. Government intervention is called for when the benefits of collective decision making outweigh the loss of decentralized individual decision making. Whether that will be the case in any given circumstances will be a matter of judgment. For one thing, in the event that the private sector yields inefficient outcomes, there is no guarantee that the public sector can do any better. For another, different persons will disagree on the extent to which redistributive goals are important, and on the extent to which governments can succeed in achieving them. Since redistribution is one of the key functions of government, this leads to disagreements over the role of government in the economy.

From a normative perspective, the role of government can be seen as facilitating the maximization of some notion of social welfare. The appropriate form of the social welfare function is not something which need concern us as long as we agree on some general features of it. The main such feature is that it is some aggregate of individual utility levels. As such, it conforms with individual preferences, and also it satisfies the Pareto principle.² The way in which individual utility levels are aggregated involves a value judgment which is resolved in the political arena. The aggregation can involve differing degrees of tolerance for inequality of utility levels, referred to as *inequality aversion* in the literature. The degree of inequality aversion displayed by political decision makers is relevant both for the extent of government intervention in the economy and for the desired degree of decentralization. This will become apparent below.

Looking at the role of government from a social welfare perspective leads to identifying two general reasons for intervention, which correspond to two types

² A social welfare function which ranks alternatives solely on the basis of the utilities achieved by individuals in the society is referred to as a *welfaristic* social welfare function. It rules out non-utility aspects of different social states such as freedom of speech and religion, justice, and so on (except as they are reflected in utility levels. The Pareto principle says simply that if at least one person's utility rises due to some change in the economy and no one's falls, then social welfare rises. There is a vast literature on social welfare functions. For a non-technical exposition, see Boadway and Bruce (1984).

of market failure. In turn, these two types of market failure correspond to two conceptually different steps involved in reaching the highest level of social welfare entails. The first is ensuring that the economy is operating on its *utility possibilities frontier*, that is, that it is operating with economic efficiency. This requires seeing that gains from trade are exploited to the fullest extent possible consistent with the resources, technology and constraints facing society. The constraints involve both institutional and informational constraints as we shall see below. This is referred to as the *efficiency* objective of economic policy. The second is ensuring that the 'best' point on the utility possibility frontier is collectively chosen, that is, the point which yields the highest level of social welfare. This is the *equity* objective of economic policy. The outcome generated by a market economy will generally fail to satisfy both the efficiency and the equity objectives of policy; hence, a potential role for government.³

It will be useful for our subsequent discussion of the assignment problem to mention briefly some of the more prominent sources of inefficiency and inequity in the market economy. These market failures will be the ultimate source of the normative rationale for government intervention. We consider efficiency failures and equity failures in turn. We can be brief since most of these items are well known from the public economics literature.

a. *Sources of Inefficiency in the Market Economy*

- i. *Public Goods*. Public goods are those characterized by jointness of consumption, and, in some cases, by non-excludability. Because of the free rider problem, markets cannot be relied on to provide efficient amounts of public goods. Though this is the standard rationale for government intervention in the literature, very little of government expenditures are on public goods. Recognition of this is important for the assignment problem since much of the literature on fiscal federalism has also focused on the provision of public goods. Public goods may also be limited either by geographical proximity, in which case they are referred to as local public goods, or by congestion, in which case they are club goods. Both of these cases of public goods are relevant for the assignment of functions.

³ These failures are related to the failure of the so-called *two fundamental theorems of welfare economics* which summarize the strengths of the competitive market mechanism. The first of these theorems states that, in a certain set of idealized circumstances, the market, if operating competitively, will yield an efficient outcome; that is, it will yield a point on the utility possibility frontier. The second states that any Pareto optimal allocation of resources can be achieved by a competitive market mechanism combined with a suitable redistribution of initial wealth among households.

- ii. *Externalities.* These are special cases of the joint consumption property in which private economic agents undertake activities which have benefits or costs for others without being priced. Governments may respond by assuming responsibility for their provision, or by using corrective mechanisms such as taxes (subsidies) or quantity regulations. Since many externalities are limited geographically, decentralization of their control to lower levels of government is a possibility.
- iii. *Economies of Scale.* The minimum cost output for a good or service may be large relative to the market being served, in which case competition will not prevail. Private provision would result in an inefficiently low level of provision and the existence of positive profits. Governments may undertake to provide the good or service themselves in an effort to attain a more efficient level of output. Or, they may regulate private provision by stipulating prices or rates of return that can be earned.
- iv. *Unemployed Resources.* Problems of coordination on some markets such as labor and capital may cause resources to be unemployed. There is some literature indicating that these inefficiencies may be mitigated by government policies, such as unemployment insurance or macroeconomic policies, though there is considerable disagreement about the effectiveness of government policies for these purposes. Nonetheless, most governments tend to engage in them.
- v. *Absence of Markets.* In some cases, markets for engaging in certain types of trades simply do not exist. A good example of this is the market for risk. Markets may simply be too thin to trade away all possible diversifiable risks. On the other hand, it may be that some forms of risk are induced by government action itself. For example, the absence of efficient private markets in unemployment insurance may be a result of the fact that the event being insured against, i.e., unemployment, may be at least partly under the control of the government.
- vi. *Imperfect Information.* Markets may be inefficient because of asymmetric information problems. The two most common forms are *moral hazard* and *adverse selection*. Moral hazard refers to a situation in which one side of the market can take actions that affect the market outcome, but that cannot be observed by the other side. Market outcomes will then involve a non-optimal amount of such actions. Adverse selection occurs when participants on one side of the market differ from one another in some characteristic that is not observable to the other side. Such markets are known to yield inefficient outcomes, and perhaps even to preclude equilibrium outcomes. These problems can occur in a wide variety of markets, including labor, capital, durable products, and

services such as insurance. The general consensus in the literature is that in most cases, governments have little or no informational advantage over private sector participants and therefore can do little to improve on the inefficiency of private markets. Given this, the government may be no more efficient at providing such things as health insurance and unemployment compensation than the private sector. We have to look at equity arguments for the widespread tendency for these things to be provided by the public sector.

b. *Sources of Inequity in the Market Economy*

- i. *Unequal Incomes.* The most obvious manifestation of inequity in a market economy is inequality in the distribution of incomes. These differences arise from many different sources including natural abilities, inheritances, accumulated human capital, work effort and luck in the market place. Virtually all economies attempt to redress income inequalities by redistributive policies of various sorts, both through money transfers and through in-kind transfers. Apart from the desired amount of redistribution being a matter of value judgment, redistribution based on income is of limited usefulness in achieving equity objectives. For one thing, income is a rather imperfect measure of economic well-being since, for example, it does not reflect non-market sources of utility such as leisure and household production. For another, income for tax purposes can be readily varied by households by varying their behavior or by concealment. The main message to be taken from the extensive theoretical literature on the optimal income tax is that redistribution by income levels is a relatively limited policy instrument which needs to be supplemented by other instruments, such as targeted in-kind transfers (e.g., housing, food stamps) and the provision of universal public services such as education.
- ii. *Social Insurance.* In fact, there are differences other than the ability to earn income that are at least as important sources of inequality in utility levels, and that can be, and are, used as bases for redistributive policies. Examples include health status, employment status, location of residence, and date of birth. The characteristics possessed by each person is largely a matter of luck at birth. Redistribution based on these features is sometimes referred to as *social insurance*. If persons could purchase insurance against being unlucky in these characteristics, they would. They obviously cannot do so because insurance could only be purchased after the event being insured against is revealed. Thus, they can only be 'insured' after the fact by the public sector. This might be viewed as the prime justification for public health insurance, unemployment insurance, assistance to the disabled, intergenerational transfers in favor of unlucky cohorts, and so on.

The recognition that there is a limit to the extent of redistribution that can be achieved through the income-based tax-transfer system, and that a substantial part of actual redistribution is achieved through the provision of services in kind and social insurance based on other personal characteristics, has important implications for an appreciation of the role of government and of the assignment of functions. For one thing, it helps explain why most studies of the incidence of taxes tend to show that they are only mildly redistributive even based on imperfect measures such as income. For another, it leads one to recognize that much of what governments actually do is redistributive in nature if not in intent. The implication of this for the division of powers then depends upon one's view about what level of government should be responsible for redistributive measures. We return to this issue below.

Our discussion so far relies on normative arguments about the role of government. Different persons will have very different views about how closely actual governments come to being social welfare maximizers, or even take equity into account at all. Moreover, governments are observed to do many sorts of things which are hard to justify on normative grounds, including regulatory activities, the subsidization and protection of certain activities and the provision of certain goods and services which the private sector could provide more efficiently. Thus, far from being the social welfare maximizers of normative public economics, governments may be controlled by self-interested bureaucrats or vote-maximizing politicians with relatively little interest in social welfare. In fact, there is an entire spectrum of possibilities ranging from the fully benevolent government to the purely selfish. The point on the spectrum chosen depends jointly on the preferences people express through their voting behavior and on how well political decisions take voters' preferences into account. Some well-known points on the spectrum are as follows.

- ii. *Ethical Voting.* It might be argued that people vote according to their ethical preferences. For example, it is well known that, from a purely private point of view, the act of voting is itself irrational. One way to explain voting behavior is with the notion that it is done without self-interest in mind. To the extent that governments actually behave according to voters' preferences, this would entail that looking at them as social welfare maximizers has an element of truth to it. This sort of explanation would be consistent with the seemingly massive redistribution programs actually observed in the modern welfare state, which are difficult to explain solely in terms of vote maximization or the self interest of bureaucrats.
- ii. *Altruistic Preferences.* A milder form of equity is obtained by assuming that, though persons vote selfishly rather than ethically, their preferences include altruism toward the less well off. This would give rise to an exploitation of

Pareto-improving transfers. It is not likely to account for the extent of redistribution observed in practice.

- ii. *The Selfish Voter.* If voters are purely selfish, a political system which obeys voters' preferences will redistribute towards the decisive voters, such as the median voter. Most models of voting would suggest that this would involve some redistribution towards the mean or lower mean, and would be consistent with some of what is observed. It would still have difficulty explaining redistribution towards the least well off persons, who are also often the least influential politically.
- ii. *Pressure Group Influence.* The political system may respond less to voters' preferences than to those of pressure groups and special interests. This is likely to give rise both to policies favoring these groups and to wasteful rent-seeking behavior as new groups are induced to form. It is more likely to explain special forms of treatment of well-defined groups than broadly based redistributive policies.
- ii. *The Leviathan.* At the extreme end of the spectrum is the government which acts purely in its own interest relatively unconstrained by the voters. It is usually thought to be interested in maximizing its own size. To the extent that this is true, it will have consequences for the assignment of powers in the sense that greater decentralization may reduce the ability of governments to increase their size wastefully.

One's view of the proper assignment of powers will be influenced very much by the weight one puts both on equity considerations (i.e., one's aversion to inequality) and on one's view of the extent to which governments act in the social interest as opposed to their own interest. These will differ from observer to observer. As well, the conditions will differ systematically across countries. Thus, our discussion of the assignment of powers cannot give definitive answers to precisely how decentralized public decision making should be. Nonetheless, the case for decentralization is suggestive and persuasive enough to be able to make qualitative judgments in many cases.

2. Efficiency and Equity in a Federal Economy

Ultimately the assignment of powers and the optimal policies undertaken by each level of government depend upon the same efficiency and equity considerations that determine the rationale for government intervention in the first place. However, there are many efficiency and equity considerations that are special to federal

economies. Let us consider these in turn.

a. *Efficiency Considerations in a Federal Economy*

The achievement of efficiency in a market economy involves outputs being produced with the least required inputs (*technical efficiency*), exchanges being made by all consumers at the same relative prices (*exchange efficiency*), costs being minimized by all producers at the same relative input prices (*production efficiency*), and consumers and producers facing the same set of relative prices in all markets (*overall efficiency*). A decentralized competitive market economy goes a long way to achieving economic efficiency. Government intervention on efficiency grounds may be required to provide public goods, internalize externalities, ensure resources are fully employed, supplement missing markets and deal with the consequences of scale economies. In a federal economy, in which there are internal political boundaries and in which geographical differences exist, there are various other dimensions of economic efficiency which are important. A list of the more important of these is as follows.

- i. *The Internal Common Market.* This involves the unimpeded flow of all goods, services, labor and capital across political borders within the country. There should be no barriers to movement imposed by governments within the federation, whether by taxes and subsidies, by regulation, by preferential procurement policies or by the design of local public goods and services. Of course, there may be natural costs to trade such as transportation costs, language, and so on. We are concerned instead with government imposed barriers. The absence of these will ensure that resources are allocated efficiently within the federation. In a federation in which decision making is decentralized, violations of the efficiency in the internal common market may be imposed by lower level governments either wittingly or unwittingly. In the former case, governments may use policies like taxes, subsidies and regulations to improve local conditions at the expense of non-residents. This is referred to as *interjurisdictional competition*. If all jurisdictions engage in it, the result may be that all are worse off, akin to the outcome of tariff wars between countries. On the other hand, distortions may arise simply because countries adopt differing policies in an uncoordinated fashion. There may also be benefits from lower levels of government competing with one another. There is a body of literature associated with public choice economists which takes the view that competition between governments is a good thing since it induces more efficient local government decision making, reduces the size of government and ensures that local governments act in the best interests of their residents. This may be used as an argument for decentralization.

- ii. *Local Public Goods and Externalities.* The traditional argument for public intervention in the economy is the provision of public goods and services. By the same token, the traditional argument for the decentralization of functions to lower levels of government is the fact that some public services are of a purely local or regional nature. Efficiency in a federation requires that the level of local public goods in each locality be determined by the benefits of the residents being served. Residents of different localities will generally prefer different levels of provision. A decentralized federation has the benefit that each local government is able to provide the type and mix of public services that its local residents prefer. Furthermore, if residents are relatively mobile, they should be free to move to the jurisdiction which best caters to their preferences. The so-called *Tiebout model* has stressed the benefits of free migration ('voting with one's feet') combined with decentralized decision making in a federation in which some public goods are of a local nature and persons have different preferences. We have stressed that not all of government expenditures are for public goods. Governments also provide many quasi-private goods. Similar arguments about the benefits of catering to the tastes of local residents can be made in the case of these types of public expenditures. As well, some regulations may be local in nature. For example, governments may use regulations to protect local culture or languages. In these cases, culture or language may be viewed as local public goods.
- iii. *Interjurisdictional Spillovers.* In practice, the beneficiaries of local public expenditures may not coincide with the residents of the locality undertaking the expenditure. Residents of neighboring jurisdictions may benefit from (or be harmed by) policies of a given jurisdiction. There are said to be *interjurisdictional spillovers*. Since local governments will have no incentive to take account of the spillover benefits they generate for non-residents, local decision making may be inefficient. Intergenerational spillovers can be analyzed in a way analogous to externalities in the private sector involving individual decision makers such as households or firms. As is well known from that literature, the spillovers can be 'internalized' in a variety of ways, including direct negotiation among the parties involved, taxation or subsidization by a higher authority, and regulation by a higher authority. In the context of fiscal federalism, the parties involved are lower levels of government and the higher authority is a higher level of government.
- iv. *Fiscal Efficiency.* In a federation, the decentralized decision making of lower levels of government itself can give rise to a particular form of inefficiency, referred to in the literature as fiscal inefficiency. The problem arises because different governments at a given level are typically able to provide different

net fiscal benefits (NFBs) to their residents, where by NFB is meant differences between the value of public services and their tax cost. The existence of differences in NFBs across jurisdictions means that the benefits of residing in one jurisdiction relative to another include not only the relative earnings differentials between the two states, but also the differences in NFBs between them. To the extent that persons are mobile across states, they will allocate inefficiently since they will equate the sum of earnings plus NFB in the two states (net of any costs of moving) while economic efficiency involves equating only earnings net of moving costs.

There are three main sources of NFB differentials in a federation.⁴ The first is a *fiscal externality* that arises in an economy with local public goods.⁵ It results from the fact that persons entering a local jurisdiction do not take account of the fact that they jointly consume the local public good with other persons in the locality and reduce the tax burden to them from financing the public good. Though this has figured prominently in the literature, it is probably not of great importance in practice, partly because the phenomenon is not likely to be quantitatively significant, and partly because most local services are not truly 'public' in nature. A more important difference in NFBs arises from differences in access to source-based tax bases, especially taxes on resource rents. A locality which has the larger such tax base can provide public services at lower tax rates than other localities. The third source of NFB differences results from the redistribution inherent in lower level government budgets. For example, suppose lower governments provide public services which are like private goods in equal per capita amounts to all residents. Suppose also that they finance these public expenditures by a proportional income tax on all residents. Then, the budget has an overall redistributive effect. High income persons obtain a negative NFB, while low income persons obtain a positive NFB. However, if one compares across jurisdictions, persons in low average income localities will have systematically lower NFBs than those in high average income localities, and the NFB differential will be the same for persons of different income classes.

- v. *Tax Harmonization.* Lower level governments will generally have some independence in raising their own tax revenues. Assuming that this is done in an uncoordinated fashion, inefficiencies will typically arise because tax distortions

⁴ For a more detailed discussion of these sources of NFB differentials and their relevance for policy, see Boadway and Flatters (1982) and Wildasin (1986).

⁵ The notion of a fiscal externality was first discussed in detail in Buchanan and Goetz (1972) and analyzed in detail in Flatters, Henderson and Mieszkowski (1974). The circumstances in which local government tax policies are likely to give rise to fiscal externalities are discussed in Boadway and Wildasin (1984).

differ across jurisdictions. This can be a result of differential tax rates on capital or labor income which results in a misallocation of these factors across jurisdictions, or different tax rates on the sale or production of goods and services which will distort production patterns across jurisdictions. The magnitude of the distortions will depend upon the mobility of the tax base. Thus, differential tax rates on mobile tax bases like capital will be more distorting than those on tax bases like real property. These sorts of distortions in a federation will be mitigated to the extent that tax systems are chosen in a harmonized manner. The harmonization can take the form of coordination among lower levels of government, or it can take the form of a higher level of government participating in the setting of tax policy for lower levels of government in a variety of ways. Participation can include centralized administration of tax collection, a centrally defined tax base or even a common rate structure. The lower level of government may be limited to setting the level of taxes, or to choosing local credits and exemptions, or to defining the entire tax structure. The local levels may or may not be involved in the tax policy chosen for the entire federation.

The harmonization of taxes improves the efficiency of the internal common market by reducing the collection and compliance costs both for the private sector and for the tax authorities, by reducing the possibility of double or non-taxation of income earned by firms operating in more than one jurisdiction, and by reducing the possibilities for evasion and avoidance through such things as transfer pricing and financial transactions designed to reallocate tax bases to low-tax jurisdictions. It reduces the potential for wasteful tax competition among jurisdictions. The benefits of tax harmonization of the corporate tax base may come about to some extent without any formal agreement to do so. That is, competitive pressure may induce a certain amount of similarity among provincial corporate tax bases. At the same time, similarity of tax bases is not sufficient to ensure efficiency. Tax competition may take the form of beggar-thy-neighbor tax policies designed to attract factors of production from neighboring jurisdictions. If all jurisdictions engage in it, the result may be similar tax structures, but inefficiently low tax rates and public services. From an efficiency point of view, it can be argued that harmonization is most important for taxes which impinge upon capital income, less important for taxes which are levied according to residency, such as labor income taxes and indirect taxes, and least important for taxes on real property. This means harmonization is less important in the indirect tax system than in the direct tax system. The main problems concern the inability to enforce the residency provisions of the tax. These can be circumvented by shopping across local borders. Given that there are no border controls, it is not obvious that anything can be done about this. In fact, because of the absence of border controls, there will be competitive

pressures for keeping sales tax rates and structures relatively similar. This will be important for our discussion of the assignment of taxes to jurisdictions.

- vi. *Expenditure Harmonization.* There may also be some efficiency advantages from harmonizing public services delivered by local governments. Differences in the design of these programs could affect migration among jurisdictions. For example, the services offered to the poor may induce the in-migration of low-income persons. This possibility could induce local jurisdictions to engage in a sort of wasteful expenditure competition whose aim was to attract desirable residents and repel less desirable ones, which could only be self-defeating in the aggregate. As well, some expenditure programs give rise to spillover benefits to residents of other jurisdictions who can take advantage of the services being provided. An example in industrialized countries is higher education. Residents of one state province may attend the universities of another state or province, thereby benefiting from expenditures done by the government of the latter. Transportation facilities are another example, as are health services. Finally, expenditure harmonization may be important vertically between government programs at different levels. Some programs will inevitably have some overlap and harmonization will avoid costly duplication of effort. Examples might include regional development programs undertaken by two levels of government, or labor training and education programs.

These examples of inefficiency in a federation have an influence on the assignment of responsibilities to different levels of government. They also give rise to arguments for intergovernmental fiscal arrangements in which higher levels of government retain some influence, if only via financial leverage, over the decentralized actions of lower levels of government. The same might be said for sources of inequity in a federation to which we now turn.

b. *Equity Considerations in a Federal Economy*

Just as decentralized decision making in a federation gives rise to possible inefficiencies, so it also gives rise to inequities. In addressing the sources of inequities it is useful to make reference to the distinction that public finance economists have traditionally made between *horizontal equity* and *vertical equity*. The principle of horizontal equity says that persons who are equally well off in the absence of government ought also to be equally as well off in its presence. It is thus a principle of equal treatment of equals. It is this notion of equity which turns out to be important in the design of federal fiscal systems. Vertical equity is concerned with the appropriate amount of redistribution from the better off to the less well off. The extent of redistributive policies to achieve vertical equity will depend upon both the

constraints on redistributive instruments as well as society's aversion to inequality. This distinction between horizontal and vertical equity has been important in the literature on fiscal federalism.

In a federal state, the issue of equity introduces two main additional considerations that would not exist in a unitary state. One concerns vertical equity and the other horizontal equity. Consider them in turn.

- vi. *Vertical Equity in a Federal State.* With more than one level of government, the achievement of vertical equity becomes more complicated. A major issue becomes which level of government is responsible for vertical equity. Those who use normative arguments to argue in favor of centralized responsibility do so on the grounds that society's social welfare function ought to include all persons in the federation on a symmetric footing. In judging how much to redistribute from the better off to the less well off, it should not matter in which locality the persons reside. They would also argue that decentralizing responsibility for equity would result in a form of interjurisdictional competition which would result in too little redistribution. Each jurisdiction would have an incentive not to pursue redistribution, since it would tend to attract lower income persons to the jurisdiction and discourage high income persons. Those who favor some redistributive responsibilities for lower levels of government argue that there are distinctly local preferences for the extent of redistribution; some localities have a lower aversion to inequality than others. This is typically used as an argument for lower level governments sharing the responsibility for redistribution with higher levels rather than taking it on exclusively.

Economists who take a more public choice oriented view of the way governments behave often argue for decentralizing the redistributive function for other reasons. They see governments as engaging in too much redistribution because of the way in which collective decisions are taken. Decentralizing the distributive function introduces interjurisdictional competition and effectively reduces the amount of redistribution that occurs. (Indeed, they apply the same argument to other functions of government as well as the redistributive one. For example, those who adopt the Leviathan perspective believe that government must be constrained from becoming too large and inefficient; decentralizing its functions in a federal system is one way to accomplish that.) More generally, economists who do not put a strong emphasis on redistribution tend to favor more decentralization of the redistributive function.

Of course, assigning responsibility for equity to one level of government or another is not a feasible option. Governments at all levels cannot avoid having an impact on the distribution of well-being since virtually everything they

do will affect different groups differently. That is true for expenditures, for revenues, and for regulation. Thus, constraining different levels of government from undertaking redistributive functions must be done either by assigning functions appropriately, or by allowing one level of government to influence the decisions taken by the other by regulation or financial incentive. This turns out to be an important part of the way in which federal economies actually operate.

- vi. *Horizontal Equity in a Federal State.* One of the most important considerations in designing a set of federal fiscal arrangements involves horizontal equity. In a federation with decentralized fiscal responsibilities, horizontal inequity is almost inevitable unless corrected explicitly. In the federalism context, it is referred to as *fiscal equity*, a term that goes back to Buchanan (1950). It is simply the notion of horizontal equity applied in a federal setting and is analogous to the concept of fiscal efficiency discussed above. As we have seen, in a decentralized federation, different jurisdictions provide different NFBs to their residents. These NFB differentials come about from differences in source-based tax revenues (e.g., resource, property and corporate taxes), and from the redistributive component of local government budgets operating through residence-based taxes. There may also be NFB differentials arising from differences in the cost and need for public services across localities. For example, localities with a higher proportion of children will need proportionately greater expenditures on education. This means that otherwise identical persons will be treated differently by the government sector, specifically by the local governments. In other words, the actions of local public sectors if left to determine their their own expenditure levels using their own revenue sources will violate the principle of horizontal equity in a federation.

As we shall see, the existence of NFB differentials forms the main argument for a system of equalizing grants from higher levels of government to lower levels. The importance of such grants becomes greater the more decentralized is the federation. The argument for the use of grants to eliminate NFB differentials has a unique property. Since the existence of NFB differentials in a federation reflects both fiscal inefficiencies and fiscal inequities, their elimination is called for on both efficiency and equity grounds. It is one of those rare instances in economics where efficiency and equity considerations do not conflict.

3. The Assignment of Functions in a Federal System

The notion of an ideal assignment of functions is an evasive one since so much depends upon institutional considerations, value judgments and empirical conse-

quences that are hard to verify. The ambiguity arises from a number of factors. The political and social structure of the country might be such as to preclude the desired amount of decentralization. For example, countries with unstable regions may be reluctant to decentralize economic responsibilities for fear of inducing political instability. The extent of decentralization one favors also depends upon how one assesses the size of the role that should be taken on by government in the economy. Typically speaking, those who wish to impose constraints on the size of government will likely want more rather than less decentralization. The relative role of central and lower levels of government will also be influenced by the degree to which governments are relied upon to redistribute income. Those who stress the redistributive role of government will generally favor more centralization than those who wish to restrain government redistributive activities. Finally, the benefits of decentralization will depend upon the responsiveness of economic activity to lower level government decision making, that is, the extent to which state government policies influence the level of economic activity attracted to the state. That remains an unanswered empirical question.

We are not able to resolve these issues since they depend either on value judgments or on unverified hypotheses about government behavior. The best we can do is to outline the sorts of considerations that need to be taken into account in deciding on the assignment of functions. Ultimately, these amount to applying the notions of equity and efficiency to a federal setting.

One useful perspective to take on the assignment of functions to higher versus lower levels of government involves drawing a parallel between the role of markets versus that of the government. Economists typically argue in favor of decentralized market solutions unless they can be shown to fail demonstrably. This is because of the well-known efficiency advantages of decentralized competitive decision making. The onus for government intervention is put squarely on the shoulders of those who argue for it. In the case of federal economies, it can similarly be argued that decentralizing functions to lower levels of government should be favored unless sound arguments can be advanced for centralized economic power. In our view, this is a useful methodological rule to adopt, and one we shall follow. The advantages of decentralized decision making in a federation should be clear from our subsequent discussion. The case for centralization will then follow from observing the circumstances under which decentralized public sector decision making leads unavoidably to inefficiencies and inequities in the federation. Even in these circumstances, centralization need not entail exclusive responsibility for a particular area of policy making. A key message of this paper is the inefficiencies and inequities that may accompany decentralization can often be addressed with central government policies which are not so intrusive as to displace decentralized decision making and the

delivery of services at lower levels of government.

Our subsequent discussion will ignore a potentially important issue for the assignment of powers in developing countries: the transition from one federal fiscal system to another. As we shall see, it will typically be the case that decision making is relatively centralized in developing countries compared with the ideal. There may be various historical and political reasons for this. One of the implications of this is that the institutions for assuming expenditure and taxing responsibilities at a lower level are either non-existent or not very highly developed. This may apply either to the decision making institutions or to the administrative and service delivery institutions. The absence of such institutions implies that there would be a certain transition cost involved in decentralizing fiscal functions to lower levels of government. This transition cost would have to be set against the benefits of decentralization in each case; but, transition costs ought not to be used as the sole reason for avoiding decentralization, with all the longer term benefits that it entails.

The previous sections dealt with the efficiency and equity roles of government in a market economy, and with the special sorts of efficiency and equity considerations which arise in federal economies. To put the assignment of powers issue in perspective, it is useful first to present the arguments for and against decentralization of responsibilities in a federation, both on the expenditure and on the tax side. Given the high degree of centralization of powers currently in existence in developing countries, this is a natural perspective to adopt. We will then look at the roles of higher versus lower levels of government in general terms, and finally consider what this implies for specific functions. We shall see that, since expenditure functions and tax functions can be decided independently, it will generally be the case that the preferred tax assignment will not generate precisely the right amount of revenue to finance the expenditure assignment. This gives rise to the possibility of intergovernmental transfers, a topic which is taken up in the subsequent section.

In what follows, our discussion will be couched in terms of a federation with two levels of government. The higher level will be referred to as the *federal* government, and the lower level as the *state* government. In practice, all federations consist of a number of different levels of government, including federal, state, regional, county, municipal, and even some special interest jurisdictions. The principles developed here can be readily extended to them.

a. *The Pros and Cons of Decentralizing Expenditure Responsibilities*

There are a variety of well-established arguments for decentralizing some of the functions of government to lower levels. The main ones are as follows.

- i. *Local Public Goods and Services.* Public goods and services, those whose services are simultaneously consumed by a large number of persons, vary according to the geographical extent of the benefits they deliver. At one extreme are national public goods, such as defense, foreign affairs and control of the money supply. These are natural candidates for centralized provision. However, other public goods and services provide collective benefits to a localized population. Though they could be provided to the various regions by a central authority, decentralization is favored for a couple of reasons. For one, the preferred amount and type of them depends upon the tastes and needs of local residents, and local governments are in a better position to match their provision with local preferences. As well, lower level provision is likely to be less costly because administrative overheads are likely to be lower, because agency and monitoring costs are likely to be lower, and because local jurisdictions are likely to face some competitive pressures from neighboring jurisdictions due to the mobility of resources across state boundaries.
- ii. *Quasi-Private Goods and Services.* Few of the goods and services provided through the public sector are public ones; most are quasi-private in nature (e.g., schools, roads, hospitals). Given that, the actual delivery of them will be done through local institutions regardless of which level of government is responsible for their provision. As with local public goods, the main beneficiaries of locally delivered quasi-private goods are residents in the locality involved. Decentralization to the states should allow the services to be provided in a way which best caters to local tastes. State delivery should be more efficient because higher level administrative overheads and monitoring costs are avoided. Efficient provision and innovation should also result because of an element of competition induced among state levels of government. On the other hand, despite the benefits of decentralizing the provision of quasi-private goods to the state government, it may be useful for the federal government to retain an oversight role if there are advantages to harmonization. For example, if residents are mobile, harmonization may be beneficial in order to ensure that labor mobility is not impeded by the lack of portability and to guard against wasteful competition among states.
- iii. *Local Preferences for Redistribution.* Preferences for redistribution may vary from one locality to another. Some localities may have more aversion to inequality than others. Or, some may prefer the use of certain types of in-kind transfers rather than cash transfers. This would suggest some decentralization of the provision of goods and services which are primarily redistributive in nature. It might also support some state responsibility for the extent of redistribution accomplished through the tax-transfer system. As with quasi-private

goods, decentralization of redistribution instruments runs the risk of introducing distortions into the internal common market as well as wasteful and futile interjurisdictional tax or expenditure competition.

iv. *Fiscal and Political Accountability.* The decentralization of responsibilities may induce more fiscal responsibility or accountability as well as political accountability into the federation. The provision is at a level of government which is 'closer' to the people served, and the government faces the discipline of persons leaving a jurisdiction which behaves irresponsibly. Interjurisdictional competition can be healthy and efficiency-enhancing, just like inter-firm competition in the private sector. The argument for fiscal responsibility is especially valid to the extent that states must finance their expenditures out of own source revenues. It can be used as a argument for decentralizing the responsibility for raising the requisite amount to finance state public expenditures, at least at the margin.

At the same time, there are certain disadvantages to decentralization, or equivalently, advantages to centralization of expenditure responsibilities. Some of the more important ones are as follows.

- i. *Interjurisdictional Spillovers.* Public goods and services provided in one locality may generate benefits for the residents of neighboring localities. If left to their own, jurisdictions would systematically underprovide those goods which have positive spillovers (and overprovide those with negative spillovers). The goods or services generating the spillover benefits may actually be quasi-private ones where the benefits spillover as a result of cross-border movements of persons or capital. Centralizing the provision is one way of internalizing the externalities. Of course, centralization of provision may not be required to take account of this. The federal government can influence the provision of spillover-generating activities of state governments in other ways as well, such as by regulation or conditional grants. In fact, if the local governments could negotiate among themselves in the manner of a Coasian bargaining solution, federal intervention may not be necessary at all.
- ii. *Economies of Scale.* As in the private sector, scale economies provide an argument for provision by larger units of government. This would be the case where administrative overheads are large. It is not clear that this argument applies to the assignment of functions between the federal level of government and the states; in most countries, states would probably be large enough to exhaust economies of scale. It is presumably more important between the states and their municipalities.

- iii. *Harmonization of Expenditures.* For some types of services, harmonization may be important to ensure an efficient allocation of resources across states. For example, portability of pensions, absence of residency requirements for housing and welfare services, and standardized education or trade qualifications make it easier for persons to move from one state to another. As well, harmonization may reduce the ability of states to engage in wasteful 'beggar-thy-neighbor' policies by using expenditures selectively to attract desirable types of factors, or repel undesirable types (e.g., persons who use a lot of public services for whatever reason). Again, the centralized provision of the services may not be necessary to achieve harmonization; the use of conditional grants to maintain national standards is often sufficient.
- iv. *Federal Equity Responsibilities.* A substantial proportion of expenditures by governments are intended to achieve redistributive objectives. This includes not only transfers, but also spending on quasi-private goods and services, and social insurance schemes. To the extent that the federal government has an interest in, and a responsibility for, equity across the nation, it will have an interest in the structure and extent of such programs. Indeed, this is likely to be one of the most important rationales for federal government intervention. Again, it is not clear that the exercise of federal responsibility in this area requires federal provision. Indeed, one of the underlying themes of this paper is that the federal government can achieve many of its equity objectives in a federal system in which most services are delivered locally, but where the federal government uses its financial and regulatory power to influence the design of state programs.

The choice of the degree of centralization versus decentralization on the expenditure side, and the precise means by which central governments achieve their desired influence, will vary from expenditure type to expenditure type. It will involve a trade-off between the benefits of decentralization, which include catering to local preferences, the ability to provide services at low cost, and creating incentives to innovate, against the benefits of centralization, which include maintenance of the internal common market, achievement of national equity, internalization of inter-state spillovers and the provision of national public goods and services. As mentioned, different observers will have different views about the ideal balance.

b. *The Pros and Cons of Decentralizing Taxation Responsibilities*

Similar issues arise on the revenue side of the budget. Although the decentralization of expenditure responsibilities implies an argument for decentralizing tax responsibilities as well, the exact extent of decentralization can, in principle, be done

independently of the assignment of expenditure functions. There are various ways in which tax decentralization can occur. One is by assigning particular tax bases exclusively to lower levels of government and allowing them to decide how much to exploit them. This form of decentralization entails not only local decision making but also local administration and collection of the tax. However, lesser forms of decentralization are possible without necessarily compromising accountability. For example, tax bases and their revenues can be assigned to lower levels of government, but their administration can be done centrally. Or, tax bases may be jointly occupied by state and federal governments. This allows for varying degrees of decentralized decision making and harmonization. The federal government may be responsible for administration and tax collection for itself and the states, and may be responsible for determining the base and possibly the rate structure. The states could then simply determine the level of taxes collected by applying their own tax rate to the federal tax liability. This is sometimes referred to as *piggy-backing* and combines the best feature of harmonization with some degree of accountability for revenues raised in each state. More decentralized systems would involve the states being able to set their own rate structures or even their own bases. In the limit, the two levels of government may simply co-occupy the same base but set their own tax structures independently as they see fit. Even in this extreme case, some minimal degree of harmonization across states is needed to ensure that the same source of income is not double taxed in more than one state. This can be accomplished by rules for the allocation of tax bases to states.

Decentralization of taxing powers is desired mainly in order to induce political accountability into the federation. As well, local jurisdictions may have particular preferences for certain features of the tax system, such as the degree of progressivity or the set of tax preferences to use. However, as with the decentralization of expenditures, the decentralization of tax responsibilities can give rise to various inefficiencies and inequities. Inefficiencies arise for two main reasons. Both involve distorting the allocation of mobile factors across states and therefore reducing the efficiency of the internal common market. This can arise simply because different states choose individually to levy different tax rates on factors of production which are highly mobile. Factors will tend naturally to locate inefficiently in the state with the lowest tax rates. Since capital is highly mobile, this would suggest that state taxes on capital within their jurisdictions are potentially highly distortionary.

Given this, tax competition may result in considerable uniformity of tax rates across jurisdictions. Even so, tax competition can itself result in a non-optimal situation. States will recognize the mobility of factors such as capital, and will have an incentive to engage in beggar-thy-neighbor tax competition to attract them. The end result may well be uniformity of tax rates but at too low a level from

the collective point of view of the states. These sorts of distortions will be less for taxes levied on less mobile factors of production such as real property. In most federations, persons will be much less mobile among jurisdictions than capital, though more so than real property and resources. Thus, taxes on persons, such as labor income taxes, income taxes based on residency, or general sales taxes will impose less efficiency costs than those on capital.

Yet another sort of inefficiency caused by the decentralization of tax responsibilities concerns what we have referred to as fiscal inefficiency. This arises from differences in NFBs across states, one important source of which is differences in fiscal capacity. Different tax capacities will result in lower NFBs in poorer states relative to richer ones, and will induce too many factors to locate in the latter, resulting in inefficiency. As we shall argue later, a way out of this problem which is consistent with decentralized tax responsibilities would involve corrective action by the federal government in the form of equalizing grants among states.

The decentralization of taxation responsibilities will also generally result in inequities from a national point of view. For one thing, differing degrees of progressivity will imply that, say, higher income persons will face different tax burdens depending on their state of residence. From a national point of view this will be horizontally inequitable. There will thus be a trade off between the benefits of allowing state governments to implement their own local preferences for redistribution and nationwide horizontal equity.

Even in the absence of state differences in redistributive policies, the decentralization of taxing responsibilities will generally give rise to fiscal inequities, which we have defined above to be a form of horizontal inequity in a federation. Persons who reside in states with higher fiscal capacities will receive higher NFBs from their state government. This will result in fiscal inequity. As with fiscal inefficiency, the remedy can involve a system of federal grants which do not compromise the ability to decentralize tax responsibilities. As we shall see, one of the key functions of grants in a federation is precisely to compensate for differences in NFBs across states.

More generally, the nature of the decentralization of revenue raising responsibilities will depend upon the role of the federal government in addressing the problem of redistributive equity. If one views equity as being largely a federal responsibility, that entails that those taxes which are best suited for redistribution should be centrally controlled. These include direct taxes on households such as income and wealth taxes. Centralized control need not imply exclusive federal jurisdiction; state government piggy-backing on federal direct taxes can be done with the federal government retaining control of the rate structure. Since transfers to

persons are equivalent to negative direct taxes, the structure of the latter might also be controlled by the federal government. The role of the federal government in the tax-transfer system becomes particularly important in a federation in which the provision of public services are highly decentralized to the states, given our view that public services are essentially instruments of redistribution. If the federal government is to retain some influence over national equity objectives, it must have the instruments with which to achieve these objectives. The less control they have over the provision of public services, the more they will need to rely on other instruments for redistributive purposes. Control of direct taxes and transfers is one such instrument; the use of conditional grants is another.

To summarize, while fiscal responsibility dictates that responsibilities for taxation be decentralized to allow state governments the ability to finance at least some of their own expenditures, this decentralization leads unavoidably to inequities and inefficiencies. The magnitude of these is greater the higher the degree of decentralization. The solution to this may partly lie in retaining some control of the tax structure in the hands of the federal government. This will induce greater harmonization of the tax system among federal and state governments thereby contributing to the efficiency of the national economy and reducing the costs of tax collection. It will also facilitate the federal government's pursuit of its redistributive objectives through the tax system.

On the other hand, the federal government can undo some of the inefficiencies and inequities of decentralized tax systems through its use of grants to the states. This will be particularly true for inefficiencies and inequities arising from NFB differentials across states.

c. The Overall Roles of Central and State Governments

These considerations of the benefits and costs of decentralization lead to a general prescription of the sorts of roles that the federal government might be best suited for, and those that should be left to the states. We first outline what these general roles might be, before turning to what they imply for the assignment of more specific functions. Our discussion concentrates on outlining the general responsibilities of the federal government, that is, considering the extent to which various roles should be centralized. The logic of this approach is dictated by the reasoning indicated above where we argued that, in the absence of a specific argument for centralization, decentralized responsibilities should be the rule.

In general terms, the presumption is that the federal government must assume

responsibility for national efficiency objectives, which include the efficient functioning of the internal common market, the provision of national public goods and the internalization of spillovers within the federation as well as dealing with other nations. The caveats to this general rule are that some of these objectives could be handled by interstate negotiation and agreement, or that the states might share responsibility with the federal government for some of these efficiency goals, such as those concerning interstate spillovers. Perhaps more controversial is the role of the federal government in pursuing national equity objectives. It is controversial to the extent that different observers might put different weights on equity as an objective *per se*. To the extent that equity is accepted to be a legitimate objective of government, the federal government can be assumed to be interested in both horizontal equity across the nation and vertical equity across income groups. We elaborate on what is entailed by these general roles in a bit more detail in this subsection, beginning with national equity.

- i. *The Federal Responsibility for Equity.* The standard argument for assigning the federal government primary responsibility for equity is that all persons ought to be treated the same regardless of where they reside in the nation, and only the federal government can assure that. As well, assigning equity to the federal government reduces the opportunity for state governments to engage in self-defeating interjurisdictional competition which would prevent equity goals from being achieved in a decentralized federation. On the other hand, those who would down play the federal role in equity matters in favor of the states do so either on the grounds that equity is unimportant or that the federal government will grow too large if it is given such responsibilities. They see decentralization as being a constraint on the size of government. There might also be a case for some state role in redistribution to satisfy purely local redistributive concerns.

Whatever one's views about the assignment of the equity function, it is not at all clear how equity can be assigned in practice to one level of government or the other. Virtually everything that governments do has a redistributive component. This especially applies to the sorts of public services that one might like to see decentralized on efficiency grounds. It seems inevitable that some joint responsibility for equity will be the norm. Those who feel strongly that national equity considerations should be addressed would argue it must be the case that the federal government has the instruments on hand to address such concerns in a manner which is consistent with whatever decentralization of expenditure responsibilities is agreed upon. As should become clear below, one way to satisfy this is to ensure that the federal government can use grants to the states for equity purposes.

- ii. *National Public Goods and Interjurisdictional Spillovers.* These are perhaps the least disputable sources of centralization of economic powers, but perhaps also the least significant in terms of actual budgetary importance. There are various ways in which the federal government may exercise its jurisdiction so as to ensure that the benefits of national public goods and spillovers are properly accounted for. One way is by federal government provision. This is the obvious solution for national public goods such as defense, foreign affairs, the control of the money supply, criminal law, and so on. However, there may be advantages from an efficiency point of view to decentralizing to the states the provision of public services, whose beneficiaries are mainly state residents but some of whose benefits also transcend state borders. In this case, the federal government can still induce the states to take account of spillover benefits without sacrificing the benefits of decentralization by providing grants to the states in support of such expenditures, but with conditions attached. The grants may be block grants with fairly general conditions setting out national standards, or they may be more specific in their conditions. The more detailed the accountability to the federal government that is required, the less will the benefits of decentralization be realized. The grants may also be of a matching nature in order to induce the states to provide enough expenditures on such goods. In some circumstances, federal financial intervention may not be necessary. It may be sufficient for the federal government to impose regulations on state government behavior, such as regulations which preclude state decisions from interfering with the efficiency of the internal common market. The problem with this alternative is that it too can detract from the benefits of decentralization, one of which is to induce responsible and unconstrained decision making by lower levels of government.
- iii. *Provision of Quasi-Private Goods.* A substantial proportion of government spending is on quasi-private goods provided on a virtually free basis. Examples include education, health care, and local services. As mentioned above, a strong case might be made for decentralizing the provision of these goods and services to state governments on the grounds that this will improve efficiency and accountability as well as the matching of local preferences. At the same time, the federal government may have an interest in both the level of provision and the type of services provided for national efficiency and equity reasons.. State provision may be inefficient because of interstate competition in services designed to attract desirable residents. Also, there may be spillover effects associated with the use of state public services of this type. Residents of one state may be able to obtain the benefits of services provided by neighboring states by temporary or permanent movement between states. States may discount the benefits obtained by non-residents and provide too low a level. More

generally, the efficiency of the internal common market may be compromised if differences in public service provision preclude the free movement of resources among states.

As well as having an interest in the effect that state-provided quasi-private goods and services have on national efficiency, the federal government may also have an interest in the equity properties of them. As we have stated repeatedly, many quasi-private goods can be seen as devices for achieving redistributive goals delivered through the expenditure side of the public sector budget. To the extent that the federal government has an interest in equity, it will have an interest in seeing that some common standards of equity are adhered to in the delivery of services. Thus, even though efficiency might dictate that quasi-private goods and services be provided by the states, it may be desirable that the federal government retain the ability to influence the way in which that authority is exercised. Once again, the system of grants may be an appropriate policy instrument for doing so.

iv. *Regulating the Internal Common Market.* An important efficiency objective of the federal government will be to facilitate the free and non-distorted flow of private sector goods, services, capital and labor within the common market of the federal economy. Decentralizing responsibilities to state governments is likely to interfere with this objective. There will be a tension between the rights of the states to undertake their policies as they see fit, and the desire of the federal government to see that they do not exercise those rights in a way which distort unduly the workings of the internal common market. The desire to preserve the internal common market suggests various things about the assignment of powers. An important potential source of distortionary government decision making involves the regulatory power. Governments commonly impose regulations in markets for goods and services (such as agriculture, transportation and communications), in labor markets and in capital markets. In many cases, these regulatory powers are used for protective purposes rather than as a way of improving the efficiency or equity of the market economy. Decentralizing regulatory functions is almost certain to interfere with the efficiency of the internal common market and for that reason should be avoided. A case also can be made more generally for the federal government (or the courts) being able to override state regulations which distort the internal common market. This might apply not only to state regulations but also to state taxes and subsidies and other expenditure policies.

v. *Tax Assignment and Harmonization.* The general arguments in favor of decentralization apply with much greater force on the expenditure side than on

the tax side of the budget. There are obvious administrative and compliance economies from having a single large tax collecting authority. As well, the centralization of tax policy facilitates the achievement of equity objectives by the federal government. Moreover, decentralizing tax powers leads to inefficiencies in the internal common market both because of the possible distortions imposed by state tax policies on the allocation of resources across states, but also because of the fiscal inefficiency that arises in a decentralized system when different states have different tax capacities. These factors have implications for the assignment of taxes to levels of government as well as for the role of the federal government in coordinating tax policies of lower levels of government. In terms of assignment, the more 'mobile' the base, the stronger is the case for centralization. Also, for equity purposes, federal control over direct taxes is important since these are the taxes best designed to address equity issues. It should be emphasized that the advantages of centralization of tax collection and tax policies need not entail that certain taxes be assigned exclusively to the federal government. There can be tax sharing arrangements which combine federal collection and administration as well as federal control of the tax structure with state responsibility for setting its own rate level. Nonetheless, for effective federal control, a sufficiently large share of the tax room must be retained by the federal government. The upshot is likely to be a situation in which the revenue raising capacity of the federal government is greater than its expenditure responsibilities, and vice versa for the states. That is, there will be a *fiscal gap*. Not only is this fiscal gap a natural consequence of the fact that the case for decentralization is stronger on the expenditure side than the tax side of the budget, but also the fiscal gap is a desirable feature of federal systems to the extent that federal-state grants have a useful role to fulfill. That role is discussed further below.

- iv. *Transfers and Social Insurance.* Along with the provision of public goods and services and the provision of quasi-private goods and services, transfers payments to persons and businesses comprise most of government expenditures (especially in industrialized countries). Some of these transfers are for redistributive purposes in the ordinary sense, and some are for industrial policy or regional development purposes. Some are also for redistribution in the social insurance sense, such as unemployment insurance, health insurance and public pensions. Several factors bear on the assignment of responsibility for transfers. In the case of transfers to business, many economists would argue that they should not be used in the first place. But, given that they are, they are likely to be more distortionary if used at the state level than at the federal level. This is because the objective of the subsidies is typically to increase capital investment by firms, which is mobile across states. As for transfers to individuals, since

most of them are for redistributive purposes, their assignment revolves around the extent to which the federal level of government assumes primary responsibility for equity. From an economic point of view, transfers are just negative direct taxes. One can argue that transfers should be controlled by the same level of government that controls direct taxes so that they can be integrated for equity purposes and harmonized across the nation for efficiency purposes. The case for integration at the central level is enhanced when one recognizes the several types of transfers that may exist to address different dimensions of equity or social insurance. There is an advantage of coordinating unemployment insurance with the income tax system or pensions with payments to the poor. Decentralizing transfers to the states will likely lead to inefficiencies in the internal common market, fiscal inequities and interjurisdictional beggar-thy-neighbor policies.

To summarize, the role of the federal government relative to state governments is predicated on the provision of national public goods and services, the maintenance of the efficiency of the internal common market and the pursuit of redistributive equity nationwide. The importance of the latter determines to a great extent the degree of centralization of the federation. Equity objectives influence the role that the federal government should assume in the direct tax system and the system of transfers. They also have a bearing on the federal government's interest in the provision of quasi-private goods and services, many of which serve a redistributive function. And, the federal government's interest in equity affects its use of the federal-state transfer system to influence the way in which state governments behave and to redistribute resources among states in an equalizing manner. In other words, the extent of the role of the federal government is largely determined by its interest or lack of interest in redistributive matters.

d. Features of the Optimal Assignment of Responsibilities

We have stressed that the search for an ideal assignment of economic functions to different levels of government is bound to be in vain because different persons are likely to come to different judgments about such things as the way in which governments behave, the importance of competition among governments, the empirical effects of government policies on the allocation of resources and the importance of equity as a role of government. Nonetheless, on the basis of the above discussion of the advantages of centralization versus decentralization, certain broad prescriptions might be made about which functions should be decentralized. We outline here a view of the assignment of powers which we think would obtain the consensus of a broad spectrum of economists despite the judgments involved.

In general terms, the federal government should be largely responsible for stabilization policies, for addressing national redistributive equity objectives, for ensuring the optimal provision of public goods and services whose benefits transcend borders, and for the maintenance of an efficient and smoothly-functioning internal common market in goods and services, labor and capital. The equity objective includes both horizontal and vertical equity. Economic responsibilities should be decentralized to the states to the greatest extent possible consistent with these national economic objectives. The states should be responsible for the provision of goods and services of a local or state nature, that is, those whose beneficiaries are mainly within state borders. They might also share some responsibility for redistribution with the federal government. The reason for this is partly because states might have differing views about the ideal amount of redistribution within their jurisdictions, but also because many of the fiscal actions of the states will have unavoidable effects on equity, especially those arising from their expenditures.

From these general principles follows a preferred assignment of expenditure responsibilities. The states would be responsible for the delivery of public services which are of a quasi-private nature, including health care and insurance, education in all forms (including post-secondary and manpower training), welfare services, family and child support services, state transportation and communication services, local utilities and municipal services, and resource management (including local land management and environmental issues). The federal government, on the other hand, would be responsible for expenditures of a clearly national nature, including defense, foreign affairs, international trade, immigration, etc. For stabilization purposes, the federal government should assume responsibility for the central bank and the currency. Following these principles would result in an assignment of expenditure responsibilities for goods and services provided through the public sector which is relatively decentralized.

At the same time, the federal government maintains an interest in the way in which the states exercise their expenditure responsibilities. For example, there are consequences for national efficiency and equity from the way in which the states design their expenditure programs. In the case of education, equity objectives may imply that equal opportunity and accessibility are important objectives. Efficiency might suggest some harmonization of curriculum standards and portability from one state to another. Similar arguments can be made to favor accessibility and portability of health care as well as some more or less comprehensive definition of the types of services covered by public health care expenditures. These objectives can be achieved while maintaining the integrity of local delivery by federal intervention in the form of conditional grants to the states. This is referred to as the use of the *spending power*. If the spending power is used wisely, the benefits of decentralized

decision making and delivery can be achieved alongside the harmonization of policies to ensure that national equity and efficiency objectives are met. This requires an exercise of the spending power which is not too obtrusive and overbearing of state decision makers and which requires only a minimal amount of accountability. In the absence of the spending power, complete decentralization of the provision of public goods and services to the state level could lead to wasteful expenditure competition and to substandard levels of efficiency and equity.

To ensure a smoothly-functioning common market, responsibility for those regulatory functions which have effects crossing state borders should reside with the federal government. These functions include the regulation of international and interstate trade in both goods and services (including such things as agriculture, communications and transportation), environmental and resource use issues involving more than one state, and capital markets. The assignment of labor market regulation, including professional and trade licensing and employment practices, should also be at the federal level to maintain undistorted labor mobility in the internal common market. At the same time, given that labor market circumstances differ from state to state, there might be some role for state participation in the regulation of labor markets, provided that such regulation is not used in a discriminatory or distortionary way. On the other hand, the case for assigning to the federal government any role that may exist in regulating markets for capital, goods and services is strong. In contrast to the case of public sector expenditures, the assignment of regulatory responsibilities would be quite centralized.

It may be that the most effective way to exercise these regulatory responsibilities is through quasi-independent regulatory bodies, which may well have state representation. Even so, the federal government must maintain effective responsibility even if they choose to exercise it using such bodies. By the same token, for some types of expenditures, it may be sensible to form *special purpose bodies* whose role is to deliver a particular type of public service. This may be the case for public services whose optimal delivery level is between existing levels of government, or those for which user fees or benefit taxes are the appropriate mode of financing. Examples of such bodies include local school boards, conservation or environmental authorities, and transportation or communications bodies. They may be given varying degrees of autonomy when it comes to raising revenues and delivering services, and they may have varying degrees of political accountability. They may represent a means of decentralizing economic decision making without decentralizing political authority and inducing political instability. The point is that one need not necessarily feel bound by the existing set of political jurisdictions.

The assignment of tax responsibilities can be determined somewhat indepen-

dently of the assignment of expenditures, though accountability arguments can be used to limit that independence. The income tax system should be under the control of the federal government, though there is no reason why the states could not co-occupy the field. Federal dominance assists in the fulfillment of the objectives of national equity since the income tax is one of the main instruments that can be used for redistributive purposes. Federal control of the income tax also serves to ensure that it will be harmonized across the nation so that administrative and compliance costs are minimized and resource allocations across states are not distorted by state tax provisions. It might also assist in the management of macroeconomic policy objectives.

Other direct taxes often used include capital taxes, taxes on wealth and wealth transfers (including bequests and inheritances), resource taxes, real property taxes and payroll taxes. A strong case can be made for ensuring central control of the first two of these. In the case of capital taxes and taxes on wealth, inheritances and bequests, mobility considerations are paramount. State taxation of capital will either be ineffective because of tax competition among states, or it will lead to distortions in the allocation of capital. Similarly, states are likely to compete away taxes on wealth, inheritances and bequests thereby reducing their effectiveness.

Resource taxes are an interesting case since arguments can exist for both centralization and decentralization. The problem with decentralizing them is not so much one of mobility, but of the fact that resources tend to be distributed highly unevenly among states. From an equity point of view, one can argue that property rights to the bounty of natural resource endowments ought to rest with the national government to be shared among all citizens. Giving the states the right to tax resource rents leads to differential NFBs across states with the resultant fiscal inefficiencies and inequities that we have discussed earlier. Thus, a case can be made for federal assignment of the collection of resource rents for those resources which are of significant size and which are unevenly disbursed among states. Common examples include oil and gas properties and significant mineral deposits. At the same time, a case can be made for retaining state control over the collection of production taxes or royalties for other types of resources. Those of lesser importance such as small mines and quarries might be good sources of revenues for states. The same might be said for timber properties. In the case of resources, an additional consideration arises and that is the role of the government in managing, developing (including providing infrastructure) and conserving the resource. These are often functions whose primary benefit accrues to state residents. To the extent that state tax and royalty systems are useful for these regulatory purposes, decentralizing responsibility for them would be a good thing. If needed, the federal government could always provide general incentives over resource usage by its spending power

or its regulatory power. The upshot is that resource tax assignment must be considered on a case by case basis. Since resources are immobile, resource revenues are good candidates for state taxation. Centralization becomes more important the more significant the value of the resource and the more unequally it is distributed among states. Even if states assume responsibility for resource taxation, there is still the option open to the federal government to correct for unequal distributions by equalizing grants to the states.

The fourth of the above direct taxes, the real property tax, is generally taken to be an ideal tax to assign to lower levels of government, especially municipal governments, given their immobile nature. The states can serve a coordinating and administrative function by assisting in the property evaluation process and even acting as a tax collector. At the same time, they can insure that different municipalities within their jurisdictions which have different property tax capacities can nonetheless provide comparable levels of services to their citizens. That is, the states can eliminate NFB differences within their borders just like the federal government can across states.

Finally, it could be suggested that the federal government could have access to payroll taxes as well since they are complementary with income taxes. On the other hand, since these are not important instruments for equity, there is no reason for federal dominance in the field. In fact, payroll taxes would make a good source of revenue raising for the state governments. They are typically single rate taxes applied on labor income only. As long as the rate difference is not too great across states, they are likely to cause little inefficiency since labor is much less mobile than capital.

As we have mentioned, transfer payments to individuals such as unemployment insurance, public pensions, payments to the poor and payments for children, should be thought of as negative direct tax liabilities and treated symmetrically with direct taxes. This means they too should be available to the federal government. The delivery of some of them could be delegated to the states to improve administrative efficiency and accountability, provided the federal government retains some ability to ensure national standards of equity.

In the case of indirect taxes, the argument for central control is less compelling than it is for the case of direct taxes. To the extent that the decentralization of revenue raising capacity is desired, indirect taxes are good candidates to be assigned to the states. In fact, the design of the indirect tax system itself depends upon the extent of decentralization of taxes to the states. If the general sales tax is to be assigned to the states, it may be very difficult administratively to operate the tax on a multi-stage basis, such as a VAT. The system of crediting under a VAT would

require that cross border transactions be accounted for in order to be able to credit taxes paid on earlier stages of sales which cross state borders. With the possibility of differential state tax rates and different sets of exemptions, this becomes a difficult task. This means that decentralization of general sales taxation to the states may call for a set of single stage retail sales taxes in each state. The benefits of a VAT in terms of administrative and economic efficiency would be lost. The base used by states would inevitably be narrower than is optimal, and the well-known problems of evasion and the inability to exempt taxes on capital purchases and exports completely would persist. More generally, the states would likely be forced to adopt a consumption rather than an income basis for the tax (which may not be a drawback). Also, the ability to enforce the destination basis would be limited by the possibility of cross-border shopping.

The converse of this applies as well. If the general sales tax is centralized to the federal government, it could use a VAT and reap all its advantages. However, it would likely be precluded from allowing the states to participate in the system in a way which gives them some discretion over their own rates and base. A uniform system nationwide would be much preferred. This would not preclude a form of revenue sharing for the proceeds of the tax, either on the basis of where the revenues were raised or on some other basis. Nor would it preclude some form of joint determination of the base and rates by the federal and state governments. Ultimately, the assignment of the general sales tax boils down to how much tax room the federal government should have relative to the states. The more decentralized are the expenditure responsibilities to the states and the more it is desired to decentralize some tax authority to them, the more beneficial it would be to decentralize sales taxes to them despite the disadvantages of so doing. Of course, it is possible that separate federal and state sales taxes exist side by side in the same tax system.⁶ The main point is that it is more important that the federal government have control of the income tax than of the sales tax.

Selective excises, such as those on tobacco, alcohol, fuel, entertainment, communications and so on, could readily be decentralized to the states, or co-occupied by both levels of government. The main efficiency issue concerns the possibility of cross-border shopping. In practice this would restrict the ability of state governments to set widely differing rates. State excise taxes can also give rise to NFB differences to the extent that different states have different tax capacities for these taxes. If so, fiscal inequity will result which the federal government will need to address with its grant structure.

⁶ It should be noted that if the states operate indirect taxes on a destination basis, including either general sales taxes or specific excise taxes, these taxes should be collected at the border on imports from other countries. Presumably this is the task of the federal government.

Overall, this implies that the states could occupy the indirect taxes fields (both general sales taxes and selective excises) and could have some access to direct taxes on residents (personal income and payroll taxes) jointly with the federal government. The states could also levy payroll taxes. The federal government would be responsible for resource taxes and taxes on capital income or wealth, with the exception of the property taxes. Wealth transfer taxes would also be centralized. Among these alternatives virtually any realistic degree of decentralization of tax capacity to the states could be achieved. This could be done by a combination of assignment of types of taxes and some tax sharing. User fees might also be a source of revenues. This would be true mainly for the state governments and their municipalities since the sorts of public services which are conducive to allocation by pricing are likely to be decentralized ones.

Despite the fact that it is feasible to transfer as much tax room to the states as one wishes, from an economic point of view, it would also be desirable for tax rates to be such that the federal government collects more tax revenues than it needs for its own expenditure purposes. This is partly a consequence of the fact that the desired amount of centralization of taxes exceeds that of expenditures. For example, the federal government needs a large enough presence in the tax field to be able to pursue effective fiscal policy. As well, we have argued that the federal government should maintain enough dominance in direct taxes to be able to achieve tax harmonization and national equity goals. An excess of federal tax collections over expenditure responsibilities also allows for transfers of funds from the federal government to the states. These transfers have their own independent role in a federal economy with decentralized fiscal responsibilities. The next section summarizes the rationale and design of federal-state transfers.

4. Intergovernmental Fiscal Relations

Federal-state fiscal relations consist primarily of a set of financial transfers from the federal government to the states and a set of arrangements for coordinating and sharing particular tax bases. There may also be interactions among governments through regulations. In principle, the two levels of government could be financially independent and separate. However, typically that is not the case. The federal government will collect more tax revenues than it needs for its own purposes and transfer some of them to the states either as grants or by the explicit sharing of tax revenues.⁷ This outcome reflects the fact that, while it may be efficient to decentralize expenditure responsibilities to a considerable extent, it is more efficient

⁷ The same might be said for states *vis-à-vis* their municipalities. We continue the convention of using the federal and state governments to illustrate the principles.

to centralize tax collections. Moreover, in a decentralized federation, there is a need for federal-state transfers in order to allow the federal government to fulfill its national efficiency and equity objectives. The purpose of this sub-section is to review the principles involved in deciding the structure of intergovernmental fiscal arrangements.

There are some common properties of intergovernmental fiscal instruments which are worth summarizing at the outset. Grants from the federal government to the states may have a variety of properties. They may be *conditional* or *unconditional*. To be eligible for conditional grants, states must use the funds in specified ways. The conditions may be very general, in the sense of being related to spending in broad areas (e.g., education), or they may be specific and require a provincial expenditure program to satisfy certain design features (e.g., a particular highway). The use of conditional grants constitutes one of the main ways in which the federal government can influence the states to exercise their expenditure responsibilities in a way which is consistent with national efficiency and equity objectives. The full amount of funds transferred for a particular purpose may be contingent on state expenditures fulfilling certain conditions laid down by the federal government. The conditions may be quite general (and, indeed, should be as unconstraining as is possible consistent with the objectives being addressed). Penalties for non-compliance with the conditions may involve holding back part or all of the funds owing. Conditional grants may be *matching*; that is, their magnitude may be a proportion of state expenditures of a particular sort. They may be *specific* or *block*, where the former refers to grants which must be used on a specific sort of program (e.g., school construction) and the latter is for a more generally defined area (e.g., education). Finally, they may be *open-ended* or *closed-ended*. Open-ended conditional grants are those whose magnitude depends upon state expenditures without any upper limit.

While the magnitude of conditional grants is related to expenditures of a given sort by each recipient state, unconditional grants can be determined by a variety of factors. Two sorts of factors are relevant — those determining the allocation of grants across states and those determining their growth rate over time. The simplest allocation formula is an equal per capita grant, in which case population is the sole determinant. Other factors commonly used include average incomes, tax capacity (i.e., the size of particular tax bases), tax effort, urbanization, age structure of the population, and measures of the cost of providing particular state public services or the relative need for state expenditures. The rate of growth over time may be the rate of growth of GDP, the rate of growth of state expenditures of particular sorts, or other such indices of growth.

Tax sharing formulas can also take a variety of forms. They can be highly centralized with the federal government determining the base and rate structure for a particular tax source, collecting the tax, and turning over to the states a proportion of the taxes collected. The revenues can be given to the states in accordance with the state in which the tax was collected (the *derivation* principle) or other formulas can be used, similar to those outlined above for unconditional grants. Decisions concerning the tax structure of jointly occupied tax bases can be decentralized in a variety of ways. The states may be able to choose a rate of tax to apply to federal taxes payable, with the federal government retaining the rights to set the rate structure and base and to administer the tax. Or the states may accept the base used by the federal government and set its own rate structure, including both tax credits and tax brackets. The states may participate in the administration of the tax jointly with the federal government, especially the auditing of state taxpayers. At the extreme, the states and federal government may act independently to set their own tax structures and collect their own taxes for the same tax. Thus, the spectrum can go from fully harmonized joint taxes to completely unharmonized taxes.

One of the purposes of this subsection is to see what formulae for grants and tax sharing arrangements follow from the theoretical discussion of federal-provincial fiscal arrangements. We begin with a discussion of the role of federal-state grants in theory, then turn briefly to a discussion of some characteristics of the optimal set of fiscal arrangements in a federal economy.

a. The Role of Federal-State Transfers

We can identify five broad economic arguments for federal-state transfers each of which is based on either efficiency or equity, and each of which may apply to varying degrees in actual federal economies. Each of them has been encountered above in a different context. They are the existence of a fiscal gap arising from the greater degree of decentralization of expenditure responsibilities than of the ability to raise taxes, fiscal inequity resulting from differential NFBs across states, fiscal inefficiency from the same source, interstate spillovers of the benefits (or costs) of state policies, and fiscal harmonization. We consider them in turn.

- i. *The Fiscal Gap.* An imbalance between the revenue-raising ability of states and their expenditure responsibilities might arise for two reasons. For one, it may be more efficient for the federal government to collect tax revenues on behalf of the states and turn the funds over to them to allow them to carry out their expenditure responsibilities. This avoids the tax competition and interstate tax distortions that might otherwise exist which would preclude the states from

raising the optimal amount of revenues on their own.⁸ Competition to attract capital, business activity and even labor would induce states to raise too little revenues relative to what would be efficient, and to distort the interstate allocation of resources. The second argument for a fiscal gap is that it essentially arises endogenously within the federation owing to the predominant fiscal and political position of the federal government. There is a certain amount of *tax room* available for the public sector as a whole. The greater the tax room taken by the federal government, the less there is available for the states. The federal government may choose to occupy more tax room than it needs in order to be able to undertake a number of its fiscal responsibilities, including managing the macro-economy, maintaining a harmonized tax system, and making the fiscal transfers that it needs to make to satisfy the objectives of such transfers to which we turn next.

- ii. *Fiscal Inequity.* Fiscal inequity arises when citizens in two different states within a federation are treated differently by the fiscal system. A federation which values horizontal equity (i.e., the equal treatment of all citizens nationwide) will need to correct the fiscal inequity which naturally arises in a decentralized federation. As argued earlier, states with their own expenditure and taxation responsibilities will be able to provide different NFBs to citizens within their jurisdictions. These differences can arise because of differences in state tax capacities, differences in the cost of providing state public services and differences in need for particular public services within the state. In a centralized federation, they would presumably not arise because the federal government would provide comparable services to all citizens using a national tax system. Federal-state grants can eliminate these differences in NFBs if the transfers to each state depend upon the tax capacity of the state relative to others and upon the relative need for and cost of providing state public services. The need for redistributive federal-state grants will depend upon how decentralized the tax system is, since differential tax capacity is probably the most important source of fiscal inequity (as well as being the one which is the easiest to measure). Thus, for example, if cost and need differences did not exist, and if provincial public services were mainly quasi-private goods provided roughly in equal amounts to all, then if the tax system were completely centralized, equal per capita grants to all states would avoid fiscal inequities. As more of the tax system is decentralized, the grants would have to take account of differential tax capacities across states. More generally, the aim of equalizing federal-state transfers is to replicate the financial consequences of a unitary state while at the same time allowing for the considerable advantages of fiscal

⁸ In technical terms, the *marginal cost of public funds* is perceived as being much higher from the point of view of the states than it is for the federal government.

decentralization. This involves designing the grants to enable the states to be able potentially to provide comparable levels of public services at comparable tax rates, without obliging them to act identically.

- iii. *Fiscal Inefficiency.* The argument for eliminating NFBs with equalizing federal-state transfers is reinforced by the fact that the same NFB differentials which give rise to fiscal inequity also cause fiscal inefficiency. Differences in NFBs across states give an incentive for persons to migrate to the state with higher NFBs. Since this differential does not reflect differences in labor productivity, this fiscally-induced migration causes an inefficient allocation of labor across states, with too many workers in high-NFB states. As with fiscal inequity, this can be avoided by equalizing transfers based on differences in tax capacity.
- iv. *Interstate Spillovers.* This is the traditional argument for matching conditional grants. Interstate spillovers exist if the benefits from one state's expenditures of a particular type accrue not only to that state's residents but also the residents of one or more other states. State governments will not have the proper incentive to provide the correct levels of services which yield these spillover benefits. In deciding on service levels, the incentive for the state is to weigh the costs of provision against the benefits to their own residents, neglecting the benefits to the residents of other states. This will result in too low a level of provision. If these spillovers arise in a reciprocal fashion from all states' expenditures on these items, all states will provide too little, and all would be better off if the provision were to increase. A system of matching federal-state grants based on the expenditures giving rise to the spillovers will provide the incentive to increase expenditures. Typically, the extent of the spillover will be difficult to measure so the correct matching rate to use will be somewhat arbitrary.
- v. *Fiscal Harmonization.* Harmonization of the expenditure programs of the states may be important for two reasons. The first has to do with maintaining the efficiency of the internal common market; the second with equity. There is an advantage to the nation as a whole from harmonizing state public expenditure programs since uniform expenditure programs will contribute to the free flow of goods and services, labor and capital and will therefore improve the gains from trade from the internal common market. Such uniformity, as well as portability, might be particularly useful in such areas as health, education and welfare as ways of encouraging the unimpeded free flow of labor among states. Expenditure harmonization can be accomplished by the use of conditional grants. In choosing such policies there will always be a trade-off between uniformity, which encourages the free flow of goods and factors, and

decentralization which may encourage innovation, efficiency and accountability. Harmonization may also reduce the possibility of wasteful interstate competition on the expenditure side. Harmonization of state expenditure programs may also serve national equity objectives. Many public services provided at the state level are redistributive in their intent, providing in-kind redistribution to state residents. To the extent that the federal government is interested in redistribution as a goal, there is a national interest in redistribution that occurs via the provision of public services. Since many of the programs that incorporate in-kind redistribution may be provided at the state level, the federal government may be restricted to influencing the design of these state programs by conditional grants, where the conditions are intended to achieve national equity objectives.

b. Features of Federal-State Fiscal Arrangements

As mentioned, the set of federal-state fiscal relations comprise both the transfers of funds from the federal government to the states through conditional and unconditional grants as well as arrangements for sharing and harmonizing the raising of revenues through taxation. The form of the fiscal arrangements depends upon the nature of the federation and the perceived roles of government at the various levels. Some general principles are clear enough.

- The first is that the system of fiscal relations must be seen as a whole rather than as a set of unrelated parts. The reason is that each component tends to contribute to more than one objective; equivalently, each objective requires more than one instrument. Moreover, some of the components are quite complementary, and some have equivalent effects. For example, tax sharing agreements have similar financial effects to unconditional grants; and, equal per capita grants financed out of general revenues have an equalizing aspect to them.
- The second principle is that the more decentralized the fiscal system is, the more important are the set of fiscal arrangements. We have taken the view that the decentralization of service provision in a federation is a valuable thing since it increases the efficiency and accountability with which services are delivered. By the same token, some decentralization of revenue-raising must accompany expenditure decentralization. However, decentralization also brings the potential for interfering with the efficiency of the internal common market both through the creation of interjurisdictional distortions and through beggar-thy-neighbor policies, as well as causing inequities among members of different states. The creative design of fiscal relations can offset these induced inefficiencies and in-

equities while at the same time preserving the benefits of decentralized service provision. In particular, the use of the spending power and the coordinating or harmonizing role of the federal government are important.

- The design of fiscal arrangements depends critically upon the reliance that economies place on governments in the process of allocating and distributing resources. The greater is the role of government, the more important will be the role of fiscal arrangements in the sense that the more will be expected of the federal government in fostering efficiency and equity. In a federation with decentralized fiscal responsibilities, this implies an active role for the fiscal arrangements as means of ensuring that state decision making conforms with national objectives.

What these general points imply for the particular set of fiscal arrangements depends upon the federal institutions of the country in question as well as how decentralized a federation it is. However, there are a set of components which would be beneficial for a wide variety of federations on the basis of the above analysis. What these imply for reforms of fiscal institutions in developing countries will be taken up again in the last section. The following is a list of some of the more important components.

- i. *Tax Harmonization and Coordination Arrangements.* The need for special forms of tax harmonization and coordination will depend upon the extent of decentralization of revenue raising in the federation. For federations where state revenue requirements are limited, tax sources for which harmonization is relatively less important can be assigned to the states. These might include excise taxes, property taxes, licenses and fees, and some resource revenues. For these taxes, little explicit harmonization is needed. Tax bases for which harmonization would be more important for equity and efficiency reasons would be assigned to the federal government, such as direct taxes (and transfers), taxes on capital and even general taxes like payroll and sales taxes.

For more decentralized federations, ways must be found of getting more revenue raising responsibilities in the hands of the states without jeopardizing national efficiency and equity. There are various ways to do this. Simple tax sharing arrangements between the federal government and the states can be negotiated whereby the federal government retains control of the base, rate structure and collection, but gives a share to the states. While this is an easy way to get revenue into the hands of the states, the states are essentially passive recipients of revenues with no responsibility for revenue raising and therefore limited fiscal accountability. Fiscal accountability can be achieved in various ways. Some broader revenue sources can be assigned to the states either exclusively or

alongside the federal government. Payroll taxes would be good candidates for state assignment, as would broad-based sales taxes. In both cases, there may be some benefits from some harmonization of tax bases and their allocation among states, though it is not essential. In the case of the sales tax, its ideal form depends upon the existence of state participation. We have mentioned that it is administratively difficult, though not impossible, to operate multi-level sales taxes at the state level because of the difficulty of accounting for interstate intermediate goods transactions. It is possible to achieve some harmonization between federal and state level general sales taxes by coordinating the bases and collaborating on collections. This is fully compatible with the state taxes being single-staged and the federal tax being a VAT.

Harmonization is much more important if the states are to have some revenue raising powers in the direct tax fields. Given federal responsibility for national equity and efficiency, it is desirable that the federal government retain control over the base and rate structure of direct taxes. States could piggy back onto federal direct taxes and still retain some responsibility for raising revenues. For example, as in the Canadian system, the federal government could collect income taxes on behalf of the states, provided the states agreed to abide by the federal base and rate structure. The states would simply set a single tax rate to apply to the federal tax base or to federal taxes payable.

Finally, in the case of resource revenues, to the extent that they are decentralized to the states, some harmonization might also be beneficial. If resource taxes were levied on economic rents, resource allocation consequences of state resource taxes would be minimal. However, typically resource taxes are levied on bases which include elements of normal capital income as well as rents.⁹ That being the case, state resource taxes have the opportunity for distorting the allocation of capital across states, and for being used as beggar-thy-neighbor policy instruments.

- ii. *Regulations.* Ideally, the regulation of markets for capital, labor and tradeable good and services should be centralized, to the extent that such regulation is used at all. If that is not possible, there should be some means of coordinating or overseeing state regulatory outcomes to be sure that the internal common market not disrupted. There are various ways that such coordination could occur. One way, which is that used in the United States, is for the federal government to have a role in overriding state laws to be sure that they do not violate the free flow of goods and services across internal political boundaries. Alternatively, the judicial (or quasi-judicial) system could be relied on to rule on whether state laws are discriminatory or restrictive of interstate trade.

⁹ For a fuller discussion of resource taxation, see Boadway and Flatters (1993).

- iii. *Closing the Fiscal Gap.* Given the greater benefits of decentralizing expenditure relative to revenue raising responsibilities, a fiscal gap will typically exist that will require transfers from the federal government to states. In the absence of reasons to the contrary, transfers should be unconditional and equal per capita in allocation. However, there are two important reasons for deviating from this.

One is the requirement for transfers to be equalizing. Equalizing transfers are required to reduce NFB differences in order jointly to achieve fiscal efficiency and equity. As we have argued, the general objective of equalizing transfers is to enable the states to provide comparable levels of public services in their jurisdictions at comparable levels of tax rates. There are a number of features to which equalization systems should conform. First, A state's grant should not be based on the actual behavior of that state, but on its fiscal capacity relative to other states (which will depend upon how states taken together behave). The simplest method is to equalize state tax capacities using a formula such as that used in the Canadian federation, whereby the equalizing grant owing to a state is the difference between the revenue the state can raise by applying national average state tax rates to its own tax bases and what can be raised by applying national average tax rates to national average state tax bases.¹⁰ Such a system equalizes the potential to raise taxes across states. There is no need to take account of actual taxes raised in a state or its tax effort; to do so would distort its behavior. One might also want to consider equalizing need or cost differential across states where these are significant, though it is hard to do so on an objective basis. Ideally, equalization should be done on a net basis such that the positive amounts owing to the less well-off states is just offset by the negative amounts owing to the better off. This can be implemented by adjusting the overall equal per capita grant mentioned above up or down for each state according to their equalization owing. Equalization becomes more important the more decentralized the system and the more unequal are the states in their fiscal capacities. It is important that equalization funds be unconditional and that they take account of all sources of revenue to states.

The other reason for deviating from a simple unconditional equal per capita grant formula concerns the use of conditional grants to influence the way in which state governments behave. For one thing, the federal government can use conditional matching grants to induce states to provide certain public services at higher levels than they otherwise would. This might be appropriate where there are significant spillover benefits involved. Matching grants may also be an imperfect way of taking differential need and cost of certain types of services

¹⁰ See Shah (1991) for details of how this sort of system operates.

into account. They may be a way of inducing states to introduce certain types of programs to begin with, which they might not otherwise do on an individual basis (such as universal health care systems). However, a matching component is typically not required for condition grants on economic grounds. The federal government may simply want to ensure that state programs do not violate national norms of efficiency and equity, for example, by imposing restrictive state residency requirements. National standards can be achieved by making the full receipt of general transfers (such as those that would otherwise be used for equalization alone or simply to transfer funds to close the fiscal gap) contingent on certain conditions being satisfied. The conditions can be fairly general, laying out basic criteria that should be followed rather than stipulating program design requirements in detail. Candidate programs might include education, health care, assistance to the poor and labor training. All of these are services which can efficiently be provided by the states, but for which some harmonization of standards is useful. There is obviously room for judgment in designing a system of conditional grants for this purpose. Any such conditions will necessarily intrude on autonomy of state. The general rule is that there must be an overriding national objective involved in using the spending power in this way.

- iv. *Institutional Control.* Who should be responsible for designing the system of federal-state fiscal relations? There are various possible alternatives. The most obvious one is to make the federal government solely responsible on the grounds that they are responsible for the national objectives that are to be delivered through the fiscal arrangements. In many countries, this is the norm. A problem with it might be the natural tendency for the federal government to want to be too involved with state decision making and not allow the full benefits of decentralization to occur. To some extent, this can be overcome by imposing constitutional restrictions on the ability of the federal government to override state decisions. Alternatively, one can have a separate body involved in the design and ongoing reform and enforcement of the fiscal arrangements. It could be an impartial advisory body, or it could be body comprised of both federal and state representatives. It could have true decision making authority, or it could be purely advisory. In any case, to be effective, it would at the least need to be able to coordinate decision making at the two levels of government.

Above all, it should be remembered that the objective of the exercise is to obtain the benefits of decentralized decision making without sacrificing the integrity of the internal economic union and of national standards of equity.

III. FISCAL FEDERALISM PRACTICES IN DEVELOPING COUNTRIES

In this section, we review some features of fiscal federalism in developing countries. Practice will, of course, vary from country to country, and economic circumstances will as well, so it is very hard to generalize. Our procedure will be simply to illustrate by example some of the characteristics of the way in which economic responsibilities are undertaken by the various levels of government in countries which are explicitly federal in structure. The examples chosen are not intended to be scientific, but simply to draw on the experience of a number of countries including Brazil, China, India, Indonesia, Mexico, Nigeria, Russia, and South Africa. We consider in turn expenditure assignments, tax assignments and federal-state grants.

Practices in developing countries tend to differ considerably from that in industrialized federations, and, as we shall see, not to conform particularly well with the theory discussed above. For example, developing countries tend to be much more centralized than their industrialized counterparts. There are various possible reasons for this. However, among them is that fact that the sorts of activities undertaken by the public sector differ considerably between developing and industrialized countries. For example, a much higher proportion of the expenditures of governments in developing countries is on goods and services, on capital expenditures and on wages and salaries than in industrialized countries. Industrialized countries spend a much higher proportion on subsidies and transfers of various types. By expenditure category, industrialized countries spend a far greater proportion of their budgets on health and welfare than do developing countries, while the latter spend a higher proportion on general public services and public order, transport and communications and, in some cases, on defense. These differences may help account for the differing degrees of decentralization between the two types of countries.

1. Expenditure Assignments in Practice

Theory suggests that the role of the central government in the direct provision of goods and services can be limited to national public goods and services, such as defense. Quasi-public goods, such as education or health care, and local public goods and services may be provided at the local level, thus matching government activities more closely with local preferences. However, the central government may have a role to play in ensuring that minimum standards are met and that differences in benefits across jurisdictions are minimized. The central government can harmonize subnational expenditures indirectly, through regulatory oversight or the conditional transfer of funds.

National governments in developing countries undertake the activities which economic theory agrees should be centralized. These include providing national public goods such as defense; controlling stabilization tools such as monetary policy; and managing external relations. Another theoretically sound role for the central government is to ensure a common internal market through controls over interstate trade. The national government is assigned this responsibility in India, Brazil, and Nigeria. The uneven distribution of natural resources argues for a federal role in exploiting oil, gas, and mineral deposits. The central government is assigned responsibility for (and property rights to) natural resources in India, Indonesia, Russia, China, Brazil, and Nigeria.

However, many central governments play a larger direct role than the theory would recommend. For example, in India, Indonesia, South Africa, and Mexico, the central government accounts for more than 70% of total expenditures. Central governments often provide services directly which are, in theory, local responsibilities. Education is a prime example. In South Africa, education at all levels (pre-primary through tertiary) is the sole responsibility of the national government, except in the self-governing territories and independent states.

Even in countries where the *de jure* assignment of expenditures agrees with theoretical principles, practices can differ. Indonesia and Brazil are two cases in point: expenditure assignments in legislation agree more closely with theory than do expenditure assignments in practice. In Indonesia, for example, legislation assigns to local governments responsibilities which include local public works, education, public health, local welfare, and housing. However, local governments do not control these activities; regulations to transfer power formally to the local level have not been passed. In practice, responsibilities overlap and the national government retains a dominant role. The central government can be involved in such local functions as buses, police protection, and traffic management. Education is again a good example. The central government has an appropriate oversight role in its responsibility for policy development and curricula. However, the central government also designs all buildings, oversees local construction of primary schools, and assumes responsibility for teachers at all levels. The role of local governments in primary education, frequently considered a local responsibility, is limited to acquiring land and building the schools. The extent of central government involvement can vary in different regions of the country. Expenditure responsibilities are frequently determined on an *ad hoc* basis, despite the clear assignment of functions in legislation.

In Brazil, the 1988 Constitution defined roles for the federal, state, and municipal governments which are consistent with the theoretical framework outlined

earlier. In particular, the Constitution defines a set of shared responsibilities which include health, education, social welfare, housing, and environmental protection. In these areas, the role of the federal government is to set standards, while the states are responsible for service delivery. In practice, however, all three levels of government provide education, health services, social assistance, and care for children and the elderly. For example, the federal government does not limit its role in education to defining national goals. Instead, the federal government provides secondary and university education; in some cases, primary education is also a federal responsibility. In several municipalities, state and federal governments are involved in such purely local functions as public markets. Frequently service delivery is not coordinated across government levels. Despite the expanded role of the national government, however, Brazil remains a decentralized federation. The share of expenditures undertaken by the central government is comparatively small, at 43% in 1988.

India is an interesting case in which the dominance of the Union government results from an overlap of legislated activities. Expenditure assignments in the constitution are not inconsistent with the theoretical framework. However, central government control of discretionary transfers and the extra-constitutional Planning Commission expands the role of the Union government. For example, the constitution assigns to the states responsibility for programs such as irrigation, roads, agriculture, education, and health. Concurrent state and Union responsibility is exercised over social security, employment, labor welfare, and economic and social planning. This mix of subnational provision and central oversight is consistent with theoretical principles. However, the role of the central government is larger than these assignments suggest. The extra-constitutional Planning Commission gives the central government direct control over development expenditures. Discretionary transfers by government ministries increase the influence of the central government. In total, the Union government dominates the federation, undertaking 70% of expenditures in 1992.

In Mexico, the dominance of the central government results from both the direct assignment of functions to the federal level and the supposed inability of lower governments to assume delegated responsibilities. In the Mexican federation the central government undertakes 80% of expenditures. This figure indicates that the central government dominates its partners in areas of concurrent expenditure assignment, such as health and education (concurrent federal-state). In addition, the central government maintains more direct involvement to compensate for the inability of local governments to undertake their assigned responsibilities. For example, constitutional reforms in 1983 assigned to municipal governments responsibility for administering local functions such as water supply and sewerage systems, security,

public lighting, and municipal markets. The actual transfer of functions has been slow, however, as many municipalities lack the administrative capacity to operate or maintain local services.

The Russian Federation provides an interesting counterexample to the problem of a clear legislative assignment of functions which is not implemented in practice. In Russia the opposite situation holds. Expenditure assignments have not been defined in legislation. In practice, the functions performed by the different levels of government correspond reasonably well to theory. In particular, the local (rayon) governments bear primary responsibility for social services, funding almost all primary and secondary education, 85% of health care, and 80% of public utilities. Some practices contradict theory, however. The central government plays a relatively large a role in transportation (constructing all roads) and education (funding all universities, technical schools, and most vocational schools). The central government has transferred to lower levels some responsibilities which it might have maintained, in particular, investment for highways, military housing, and airports. An issue to be addressed as the economy moves toward a market system is the assignment to governments of the functions performed by state-owned enterprises. Enterprises frequently built roads, buildings, schools, and hospitals, functions which are often decentralized in developing countries.

China is another fairly decentralized system. On average, the central government undertakes less than half (47%) of direct expenditures. As in Russia, subnational governments (provincial and local) are responsible for most expenditures on health and education. These include funding hospitals, clinics, all government schools, salaries for medical and teaching staff, and administration and maintenance of the systems. Welfare expenditures are also a subnational responsibility. The degree of local autonomy is limited, however. Local budgets are determined as part of a consolidated budget comprising all government levels. The approval process for lower level budgets allows the central government to exercise some control over these subnational functions. This system of local provision and central supervision is consistent with theory. Nonetheless, the central government directly provides some services which could be delegated to lower authorities. These include the funding of all national universities as well as hospitals and utilities in some urban areas.

From this brief survey it is clear that central governments often directly provide services which ought, in theory, be functions of state and local governments. It also appears that delivery of services through extra-governmental bodies is uncommon in developing countries. The Planning Commission in India is a clear exception, as are the Regional Services Councils of South Africa. These councils were created

to upgrade infrastructure in black and poor local areas and to improve service delivery. The Councils were assigned the task of coordinating services across local governments in an effort to achieve economies of scale and improve efficiency.

The assignment of the provision of social welfare or social insurance differs across countries. As noted above, in India social security is a concurrent center-state responsibility. In Brazil all levels of government are involved in social assistance. In Indonesia, family and social welfare is the responsibility of both provincial and local level governments. By contrast, in South Africa social security and welfare are responsibilities of the central government alone. In Nigeria labor welfare is a central government responsibility, as is the payment of any pensions due from public funds. In Russia, on the other hand, local governments undertake income maintenance programs, which include family allowances, pensioner welfare, and compensation for children. In China subnational governments are also responsible for welfare expenditures on orphans, the disabled, and the childless elderly. Of course, as we have mentioned above, expenditures of this type tend to be relatively less important in developing countries than they are in industrialized countries.

2. Revenue Assignments in Practice

The theory of revenue assignments suggests that the federal government should have control of direct taxes which are levied on mobile factors (such as capital); which redistribute wealth (taxes on income, wealth, or gifts); or which are assessed on unequally distributed bases (resources). The federal role in assessing indirect taxes is less obvious. Efficiency gains may result from having some degree of harmonization in sales taxes or other instruments which affect a common internal market. Administering a VAT at the federal level may be less costly.

The states and their municipalities could obtain their own tax revenues either by being assigned some tax bases exclusively, or by sharing tax fields with the federal government. Ideal candidates for the former might be excise taxes and taxes on immobile factors such as real property. They could also use general sales taxes, though for administrative simplicity single stage taxes would be most suitable. Larger amounts of revenue can be obtained by joint occupancy of broad based tax sources like general sales and income taxes. The advantage of joint occupancy is that, depending on the role of the federal government in setting and administering the tax, two important objectives can be achieved — the harmonization of the tax across the nation combined with the decentralization of some revenue raising responsibility to the states. For example, a formal arrangement by which the federal government selects the base and rate structure of the income tax and administers the tax can be combined with the ability of each state to choose its own rate level.

The states could be given more responsibility, such as participating in collection and auditing or choosing their own rate structure, at the expense of some harmonization. The flexibility of such joint arrangements is somewhat more difficult with a VAT, since the ability of the states to choose even their own rate levels complicates the administration of the tax considerably. Of course, user fees and charges are appropriate at all levels of government.

Revenue systems in developing countries are typically characterized by a large central government role and by heavy reliance on indirect taxes of all sorts, including general sales taxes, excise taxes and taxes on imports and exports, and on resource taxes where this is feasible. For example, in Indonesia the central government raised 95% of all revenues in 1990/91. The most important sources of funds were oil and gas receipts (42.6% of revenues) and the VAT (17.9%). Income taxes ranked third on the list, providing only 16.3% of total revenues. Resource taxes are also the main source of federal revenues in Nigeria. This is apparent when looking at the source of funds in the Federation Account, a divisible pool of revenues into which most federal taxes are paid. In 1988, 46.7% of Federation Account funds came from the tax on petroleum profits. An additional 31.5% came from mining rents and royalties, while customs and excises provided 15.9%. All other sources of non-oil revenues together contributed only 5.9%.

China differed from many developing countries in that its central government played a limited role in tax collection. Most revenues were collected at the local level and 'shared-up'. This system is currently in place in Russia and other countries with a legacy of central planning. In China, the share of revenues collected by the central government had been smaller than its share of expenditures, although by 1986 the shares were almost equal at 41%. Reforms which took effect in January 1994 significantly altered the Chinese system. A central tax administration agency was created to administer directly the taxes assigned to the central government. These reforms imply that the central government will now collect roughly 60% of tax revenues. The reforms bring the Chinese system closer to the theoretically desirable framework in which the central government collects excess revenues in order to redistribute funds across subnational jurisdictions. However, no reforms have been announced for the transfer system in China. The existing system of transfers is discussed below. The revenue system in China is highly dependent on indirect levies. Almost half (46%) of total revenues in the 1988 consolidated government budget came from indirect and commodity taxes. Nearly a third of revenues were generated by taxes on corporate incomes and profits. The personal income tax contributed a negligible 1.5% of revenues. Revenue sources in China are particularly concentrated. Three taxes generate nearly three-quarters of government revenues: the enterprise tax, the turnover tax, and the VAT. Five provinces provide

41% of total collections.

Indirect taxes are particularly important at the state level in Brazil and India. The most important sources of state revenue in India are the sales tax, excise duties, fees on stamps and registrations, and taxes on motor vehicles and entertainment. In Brazil, 72% of state revenues are generated by three instruments: the VAT (or ICMS), which is a state levy; the tax on inheritances and gifts; and fees for vehicle registrations. The state-level VAT is discussed in more detail below.

An exception to this reliance on indirect taxes is South Africa (though it could not be characterized as a developing country in the usual sense). Income taxes are the major source of central government revenues. In 1991/92, income taxes on individuals generated 38% of total revenues; another 19% came from income taxes on companies. The VAT and sales taxes generated 25% of revenues, while the excise duty and fuel tax raised another 12.4%.

Evaluating individual tax instruments, it is clear that central governments control almost all direct levies, as theory would suggest. The central government sets the base and rates for all taxes in Indonesia and China. The newly-legislated Russian tax system assigns similar controls to the national government. In all of the eight countries surveyed, taxes on most resources fall under federal jurisdiction. Corporate profit taxes are similarly under federal control. It is interesting to note that provincial and local governments in China can exercise some discretion despite the formal control of the central government. Enterprise taxes are one example. China has moved to a system of 'enterprise contracts', in which the tax liability of an enterprise is negotiated and established for a period of three to five years. Subnational governments can offer tax holidays or reduced rates to particular industries, or case-by-case relief to enterprises. In addition, the 1994 reforms include the possibility that provincial and local government may have limited flexibility to determine rates on their own revenue sources. Business taxes are one revenue source assigned to the provincial-local level.

The personal income tax is typically subject to federal control, with the central government setting the base and rate structure, and administering the tax. Self-governing territories in South Africa have access to this instrument as well. Nigeria is unique insofar as the federal government collects only a limited share of income taxes. It has access only to taxes paid by the armed forces, external affairs employees, and residents of the Federal Capital Territory. The predominance of state-level income tax collection hinders redistribution.

In a few cases, state governments control tax instruments other than the income tax which should theoretically be assigned to the national level because they

may affect income redistribution or capital mobility. In India, the capital transactions tax is a state instrument. In Brazil, the taxes on inheritances, gifts, and supplemental capital gains are state levies. In Nigeria, estate and gifts taxes are assessed by the states as well.

The most significant potential disruptions to the efficiency of the internal common market are the sales or VAT taxes levied at the state level. In India, the state sales taxes create a complex system. The number of tax rates varies across states, ranging from six in Orissa to seventeen in Bihar and Gujarat. The central government has attempted to harmonize the system, imposing restrictions on rate changes for 'essential and declared goods' and increasing the number of commodities subject to the Union sales tax.

In Brazil, the VAT (or ICMS) is a state levy as we have mentioned above. The tax is administered by a Council whose members are the finance ministers of all states. Council approval is required for any member state seeking to change the base or rate of its tax. In general, the Council has not approved rate changes but has allowed exemptions from the tax base for different states. This system has the potential to create differing VAT systems across the country, disrupting the internal market. Administrative costs will also increase, as tax credits across jurisdictions must be resolved. There is a separate administrative problem related to the ICMS. The base of this tax overlaps with other instruments, in particular the federal sales tax on industrial products and the local tax on services. Collection of these three taxes is not coordinated.

In some countries, instruments which are good local revenue sources in theory are not necessarily under local control in practice. The prime example is the property tax. In Indonesia and China, taxes on land, property or housing are levied by the central government (as are all taxes). However, the 1994 reforms in China may increase local flexibility to set rates within a certain range. In India, Article 269 of the Constitution assigns to the Union government the right to set succession or estate duties on non-agricultural property, although these duties have not always been levied. State governments in India levy taxes on property transactions, including immovable urban property. In Brazil, rural property is subject to a federal tax. State governments tax non-agricultural land in Nigeria. Collection of the property tax in Nigeria is a local responsibility, although the base and rate are set at the state level.

There are some examples of property taxes determined at the local level. In Brazil, local governments set the base and rate and collect the tax on urban property. In South Africa, white local authorities levy the property tax as their major source of revenue. There are some provincial restrictions on the rates charged, however.

Similarly, in Mexico the property tax is assigned to the local level. However, it is difficult to alter rates or assessments, as these changes require the approval of both the state governor and state congress.

Local governments may also find it difficult to change user fees to recover costs more effectively. It is not uncommon for the central government to exercise effective control over revenue sources nominally assigned to the local level. For example, in China, municipal Price Commissions have the authority to adjust rates for public utilities without approval from higher levels of government. In practice, however, housing rents, bus fares, and water rates have not changed in years. In South Africa, local control of fees varies with the type of local government. Regional services councils must have federal approval for their rates for water, electricity, and sewer services. In white local areas, rate changes must be approved at the provincial level, but only if rate payers file a complaint. The rents and service charges collected by black local authorities, on the other hand, are not under any local control.

In several countries, local governments have the authority to set fees within broad guidelines established by higher governments. In Russia, rayon governments are assigned the revenues from 21 taxes and fees. While the base and rate can be determined locally, the central government has legislated maximum rates for most instruments. In Indonesia all local taxes must be approved by the central government. While fees can vary across jurisdictions, the central government tries to standardize major local taxes. This central role does facilitate a common internal market.

3. Intergovernmental Transfers

The theory of expenditure and revenue assignments indicates that it may be optimal to decentralize service delivery more than decentralizing revenue collection. This necessarily implies an important role for intergovernmental transfers. As we have discussed above, unconditional revenue transfers are an appropriate tool to address the fiscal gap created at lower levels of government by the expenditure and revenue assignments. Unconditional transfers which attempt to equalize government resources across the country help address the problem of differential net fiscal benefits. The externalities associated with many quasi-public goods, such as health or education, are appropriately addressed through conditional transfers from the center to local governments. These can also be used to harmonize the provision of state public services so as to foster an efficient and equitable internal common market. These targeted transfers induce the local government to devote more resources to activities with positive spillovers. Finally, local fiscal responsibility is encouraged if there is some matching requirement in the transfers. Recall that one argument fa-

ving local provision of quasi-public goods is the increased political accountability. However, if no local funds are used in these activities, the accountability argument is weakened considerably. Matching grants can encourage greater responsibility in expenditures by requiring the local government to devote its own resources to a given activity.

Transfers are a very important source of funds for subnational governments in many developing countries. For example, in South Africa, transfers accounted for 85% of provincial revenues in 1989/90. In Indonesia, central transfers fund 72% of provincial and 85% of local government expenditures. In Nigeria, the majority of state recurrent revenues are provided by shared central funds. Excluding Lagos with its strong local tax base, shared federal revenues provided between 66.8% and 94.7% of recurrent state revenues in 1989. States in Mexico are similarly dependent on central funds. In the poorer states, for example, federal grants account for 70% to 90% of the total state budget.

a. Unconditional Transfers

In most countries, unconditional transfers are used to address the problem of a vertical fiscal gap. An exception is South Africa, which is uniquely lacking in unconditional funding. There is no unconditional revenue sharing. The only grant that appears to be unconditional is a transfer to black local authorities. This program is also the only transfer program in South Africa which allocates funds by formula. Each black local authority receives a fixed payment. The remaining funds are distributed through a formula with a positive weight on population and a negative weight on per capita income. These grants are a major source of funding. In the Western Cape province, the transfers covered 62% of general expenditures in seven black local authorities in 1991/92.

In other developing countries, unconditional revenue sharing is common. In some cases, it addresses only the fiscal gap: revenues are allocated on the basis of origin (the principle of derivation) alone, with no attempt made to equalize resources across regions. This is the case in Indonesia for forestry royalties and license fees, as well as rents on mining land. In Mexico, an arrangement begun in the 1930s continues to provide selected states with transfers based on their share of petroleum tax revenues. In Brazil, a number of municipal transfers, both federal and state, are based on origin. Municipalities receive, as federal transfers, all payroll deductions from income tax on municipal employees; half of the rural property tax revenues in their jurisdictions; and a sizable share of natural resource taxes by origin: 70% of the tax on gold and half the revenues from taxes on hydroelectricity and minerals. State transfers of the value-added tax, vehicle registration fees, and

a portion of the federal industrial products tax are also based primarily on origin. These taxes comprised almost a third of municipal revenues in 1987. States can adjust the formula to allocate the tax revenues by other factors which they consider important. In Para, for example, population, area, and fiscal effort are used to allocate the VAT and product tax revenues.

As noted earlier, Russia and China both have had a 'bottom-up' tax collection system: the majority of taxes are collected at the local level and transferred to higher governments. In this framework, revenue sharing is done on the basis of origin almost by definition. Shared revenues are in fact simply funds which the lower government has retained. Within the revenue-sharing system itself, there is no reallocation of funds across jurisdictions. The current Chinese system of central-provincial revenue sharing developed in the 1980s. Previously, provincial governments had transferred almost all revenues collected to the central government and negotiated over the share to be returned. The central government reallocated funds across provinces by establishing different sharing rates. In the current system, the bilateral negotiations are over the share of funds to be transferred from the province to the center. A separate system of grants was established to reallocate funds across provinces.

The share of revenues retained by a province was determined initially by formula. The fraction equaled the 1983 ratio of 'allowable' local government expenditures to actual revenue collections. After two years, ad hoc adjustments were made to the shares determined by the formula. By the late 1980s considerable diversity existed in provincial tax obligations. Ten provinces agreed to a multi-year 'contract' in which a tax quota was established, given the projected growth of revenues from a 1987 base. Provinces could retain revenues in excess of the quota; shortfalls were to be met through accumulated reserves. For three wealthier provincial-level governments, revenues above the quota were also shared with the central government. In contrast, Shanghai (a city of provincial status) was committed to a fixed annual transfer to the central government.

The Chinese system of intergovernmental transfers has not been revised to reflect the 1994 reforms in tax assignments. Unless expenditures are also reassigned, the expanded role of the central government in tax collection implies that transfers from the center to lower level governments will assume greater importance.

In Russia, the division of revenues between the central and provincial (or oblast) governments is specified in the 'Law on Basic Principles of Taxation' and other legislation passed in mid-1992. However, quarterly budgets during the year superseded the statutory assignments. Revenue allocations were changed in part to eliminate emerging government deficits. An important difference between the Russian and

Chinese systems is that formal intergovernmental transfers were not immediately established in Russia. *Ex ante* transfers were included for the first time in the third quarter budget. Thus changes in assigned revenues effectively replaced transfers during the first half of the year.

This was particularly true for the VAT. In legislation, the revenues are assigned to the center; in practice, they were shared with the oblasts. It is worth noting that the most important source of indirect tax revenue, the excises on alcohol, were divided evenly between the central and oblast-level governments in both practice and legislation. The shares of other VAT revenues retained by each oblast were determined by ad hoc negotiations in the first quarter. These shares, which took the emerging subnational deficits into account, differed across the 91 oblasts. In each succeeding quarterly budget, the VAT share changed. By the end of the year, an oblast could retain between 25% and 35% of the revenues it collected, depending on the economic strength of the region.

The differential VAT shares are only one aspect of the non-standardized revenue sharing arrangements in Russia. As in China, considerable diversity exists in the current arrangements with separate oblasts, and not all of them are legally sanctioned. For example, Bashkiria adopted a 'single channel' agreement: the oblast retains all revenues collected and makes a monthly transfer of a fixed nominal amount. Twenty oblasts unilaterally decided the proportion of revenues they will share with the central government. The shares are reportedly lower than those stipulated in the legislation. The ability of an oblast government to control revenue-sharing is a result of the 'bottom-up' tax collection system.

There are a number of examples in which unconditional revenue sharing is used to address the problem of horizontal inequity. In these cases, factors other than origin of revenues by state are taken into account in the distribution of funds. For example, in India, an appointed Finance Commission determines the allocation of shared revenues, such as the federal income tax and Union excise duties. The formulas used by the Ninth Finance Commission include measures of population, the income gap between each state and the richest region, tax collection, income-adjusted total population,¹¹ and backwardness.¹² State-level deficits were also taken into account in distributing the excise duties.

In Brazil, revenues from two federal taxes, the income tax and the tax on industrial products, are shared through two participation funds, one for states and one

¹¹ Three-year average per capita income multiplied by 1971 total population.

¹² A state's proportion of national Scheduled Caste and Scheduled Tribe population and agricultural workers.

for municipalities. The state participation fund is allocated by the States' Council, which initially divides the pool of revenues across regions in the country, setting aside 85% for states in the north, north-east, and center-west regions. The revenues are then allocated across eligible states by a formula which includes population as a proxy for fiscal need and the inverse of per capita income as a measure of fiscal capacity. However, the Council rejected the shares derived from this formula. The shares actually in use through 1991 were the result of modifying the formula through negotiations. The negotiated shares were higher than the formula for all but two states in the north and north-east. Shares were lower elsewhere. The distribution of municipal funds is similar. The pool of revenues is divided across categories of municipalities; for example, 12% is set aside for state capitals and large municipalities. Within each category, funds are allocated by a formula which takes into account population and per capita income.

In Nigeria, federal transfers follow a similar pattern. Federal revenues are divided across levels of government by fixed percentages. The state and municipal portions are then redistributed by formula. In 1991, for example, states received 30% of federal revenues. These were allocated by a formula which took into account minimum government responsibilities (equality of states), population, social development,¹³ land mass and terrain, and internal revenue effort. The largest weight is placed on equality. The same formula was used to allocate municipal revenues. A problem with revenue sharing was the appropriation by a number of states of the federal funds intended for municipalities. The 1989 Constitution, scheduled to take effect with the return to civilian rule, eliminates the role of the state as an intermediary.

Recent changes in the system of federal-state transfers in Mexico have increased the degree of equalization. Roughly 18% of federal revenues are transferred through a consolidated fund. By 1994, half of these revenues will be distributed on a per capita basis. The other half will be allocated on the basis of tax collections. A state's share of the fund will rise or fall as revenue collections from a particular set of taxes change relative to the national average. A smaller Municipal Fund allocates revenues to the states to pass on to municipalities. These revenues are allocated in inverse proportion to transfers from the larger fund.

While most countries engage in some unconditional revenue sharing, unconditional grants are less common. In India, the Finance Commission provides grants-in-aid to states expected to run a deficit. The methodology for identifying deficit states has improved. The Ninth Finance Commission introduced the use of a Rep-

¹³ The social development factor consists of two components: the direct level of primary school enrollment and the inverse of enrollment. The larger weight was placed on the direct level.

representative Tax System to project potential tax revenues for each state, although significant opposition was encountered. The Sixth Finance Commission (1974-1984) calculated expenditure needs using the concept of equal per capita expenditures on social services. The grants are fixed transfers which remain unchanged until the next Commission review.

In China, the central government makes transfers to provinces which are in deficit after applying the revenue-sharing formula. Provinces for whom the ratio of expenditure to revenues exceeds one retain all their revenues and receive these ad-hoc grants. Russia also developed a system of transfers to deal with oblast deficits during 1992. As VAT shares became standardized, the central government negotiated transfers to deficit oblasts on an ad hoc basis.

The use of negotiations in many of these unconditional transfers is theoretically unappealing. Allocating funds through negotiations rewards grantsmanship on the part of the recipient. It also increases the uncertainty surrounding lower level budgets, and makes the transfer process far from transparent. There is a separate concern that negotiated transfers to cover deficits will encourage subnational governments to run deficits.

b. Conditional Transfers

The allocation of targeted grants by formula is rare. Indonesia is a clear exception where formulas are used for all transfer programs. Provincial, district, and village governments receive general purpose transfers through separate funds. Most of the provincial grant and all of the village grants are allocated on an equal-share basis. The provincial transfer also takes into account the total area of the province. District transfers are made primarily on a per-capita basis, with each jurisdiction also receiving a minimum grant. The central government control over these funds varies. The district transfers are subject to strict controls: funding must be used on infrastructure projects which create local employment and use local materials. Projects funded through village transfers must be approved by the local mayor or district chief. Controls on the provincial transfers have weakened.

Specific purpose grants in Indonesia are also allocated through formulas. For example, provincial governments have access to funds targeted at road improvement. The transfers are based on a formula taking into account the length and condition of roads as well as the unit costs of construction and maintenance. A separate grant program funds most health care expenditures. Local needs for medical care are assessed using a per capita allowance for medicine, standardized expenditures for health facilities, a benchmark figure of the number of health facilities needed for a

given population, and estimated expenditures for the costs of medical personnel and facility renovation. Part of the health care grant is an in-kind transfer consisting of drugs, equipment, and other supplies. The grant includes a matching component: local governments must purchase the land for the health facilities.

A similar requirement exists in the grant program for primary education: local governments must purchase the land for new schools. Transfers through this program funded 90% of local expenditures on primary schools in 1990/91. The factors taken into account in allocating the primary school grants include the number of school-age children who cannot be accommodated in existing facilities, renovations required in existing facilities, the needs of new settlements or migrating populations, and textbook requirements. The provision of textbooks is another in-kind transfer.

India is another country which allocates targeted transfers by formula. In particular, the Planning Commission uses the Modified Gadgil Formula to distribute the majority of plan funds. The available pool of resources is first divided across regions of the country. For example, during the Sixth Plan period roughly 21% of the total plan assistance was reserved for seven Special Category States.¹⁴ The remaining funds were allocated according to the following criteria: 60% weight on a state's share of population; 20% weight on per-capita income (only for states with below-average income); 10% weight on the special needs of a state; and a 10% weight on relative tax efforts.

Most specific purpose transfers are allocated without a formula, allowing the central government considerable discretion. In India, for example, roughly one-third of federal transfers during the mid-1980s consisted of direct grants by central government ministries. This is roughly the same proportion of transfers that was allocated by the Planning Commission. Yet for the ministerial grants, no formal criteria existed. These transfers frequently took the form of contingency grants for 'natural calamities' or scheme-wise transfers to fund specific federal projects.

As noted earlier, the only formula grant in South Africa is the transfer to black local authorities. Federal transfers in South Africa typically involve some element of discretion. For example, the central government provides most funding for work on 'proclaimed major roads'. The decisions about which projects to undertake are made by provincial committee. The central government itself places strict controls on the funds it transfers to the provinces. Provincial grants are determined as part of the general central budget. The grants are divided into three categories (health,

¹⁴ Assam, Himachal Pradesh, Jammu and Kashmir, Manipur, Meghalaya, Nagaland, and Tripura; states with strategic significance and special difficulties due to terrain and tribal populations.

roads, and other) and are targeted for specific programs. Provinces cannot reallocate funds across programs without central approval. It appears that 'negotiating skill' plays a role in determining the level of resources given to a province.

One unusual aspect of South African transfers is the use of matching grants. In 1991/92, health care grants comprised the majority of federal transfers; most health grants are awarded on a matching basis. The instrument used most frequently is a matching grant for health inspectors and clinics: the federal government finances 87.5% of expenditures while the local government funds 12.5%. The grant is open-ended, but the total expenditure must be approved by the central government.

In China, all grants are made on an *ad hoc* basis. Specific grants can be given to provinces to compensate for a bad harvest or low enterprise profits due to technical investments. All provinces have access to a year-end reconciliation grant to compensate for any changes in enterprise ownership. Earmarked grants can be awarded to underdeveloped regions; to fund capital projects; or in cases of natural disaster. Neither the total pool of funds nor the criteria for allocating the resources is specified by formula.

In Russia, transfers were introduced into the third-quarter budget in 1992. These transfers were negotiated and available only to oblasts considered in need. A 'Law on Subventions' passed late in 1992 will create targeted grants to oblasts. These grants are not intended to address general deficits but rather to finance physical and social infrastructure. The legislation does not specify either the total volume of transfers or the criteria to be used in distributing funds. Observers of the developing Russian system express some concern that oblasts are being made too dependent on their own revenue sources. A lack of equalizing transfers to offset the allocation of revenues by origin could create a federation in which the quality of local services differs sharply across jurisdictions. These differential net fiscal benefit are both inefficient and inequitable.

In Brazil, negotiated transfers (*convenios*) fund regional development, agriculture, education, health, and housing. An analysis of transfers in 1985-86 found that most *convenios* were based on *ad hoc* decisions and lacked formal criteria. The central government can exercise considerable discretion and control over subnational activities. For example, primary education transfers are made through the *Convenio Unico*. States and municipalities must submit detailed proposals to document the goals to be achieved by each funded project.

As noted earlier, the use of negotiated or *ad hoc* transfers generates several concerns. It introduces uncertainty into local budgets, rewards grantmanship, and makes the process of obtaining funds less transparent for recipients. A separate

issue which emerges from this review of conditional transfers is the limited use of matching funds. Indonesia and South Africa are the exceptions, requiring some local funding in their health or education transfers.

IV. AN AGENDA FOR FISCAL RESTRUCTURING AND REFORM

The principles reviewed in Section II and the catalogue of practices outlined in Section III lead us to some tentative suggestions for restructuring the system of federal-state fiscal relations and responsibilities in developing countries. Considerable economic, political and administrative judgment will be involved in deciding which of the reforms are desirable or even feasible in different countries. The suggestions made here should be taken mainly as indicative of a general approach to rationalizing the fiscal structure in accordance with a set of reasonably well-developed principles drawn both from the literature and from practices in industrialized countries. In many cases, they amount to little more than posing questions that should be asked about existing systems.

The suggestions are organized according to the main classifications used in the paper and are presented in point form for greater clarity.

1. Reallocating Expenditure Responsibilities

- a. The decentralization of fiscal decision making and responsibility should be viewed as a desirable objective of the fiscal system. Decentralization should apply in the absence of convincing arguments in favor of centralizing responsibilities. National objectives can often be accompanied by decentralization of delivery of services by use of such things as conditional grants or regulation. Where it is necessary, accountability should be hierarchical, with states reporting to the federal government, and the municipalities reporting to the states. Special interest bodies with fiscal accountability and possibly political accountability may be created for particular areas as an alternative to creating a separate level of government (e.g., education boards, environmental boards).
- b. The federal government should assume primary responsibility for the provision of national public goods and services, for efficiency of the internal common market, for redistributive equity, and for dealing with other nations. As well, macroeconomic policy should be a federal responsibility, though fiscal policy can be shared with the states in a coordinated fashion. The federal government should be responsible for transfers to persons and to businesses and for regulation of labor and capital, and for goods and services which are mobile across states.

- c. State governments should be responsible for sub-national public goods and services, for the delivery of quasi-private goods and services such as education and health, for fiscal equity among municipalities, and for overseeing local government decision making.
- d. Where jurisdiction for a public service is shared, the roles of the various levels of government should be clarified. Generally, the federal government will be involved with overall policy, setting standards, and auditing; state governments with an oversight function; and local governments with the actual delivery of services and infrastructure.
- e. The lack of local administrative experience, institutions and competence should not be used as an excuse for not decentralizing responsibilities. If necessary, transitional funding and training should be provided.
- f. In some cases, asymmetric decentralization may be the preferred option, especially where municipalities and rural regions differ greatly in size and populations.

2. Responsibility for Taxation

- a. Both efficiency and equity factors influence tax assignment. Efficiency considerations would suggest centralizing taxes applied on more mobile bases. Equity considerations would suggest centralizing taxes which serve a redistributive purpose.
- b. Direct taxes are good candidates for federal assignment, especially corporation taxes, capital taxes, personal income taxes, and taxes on wealth and wealth transfers. Taxes on trade should also be federal. Personal income taxes are suitable for piggybacking by the state governments. This would give them access to a potentially lucrative tax base while preserving the benefits of a harmonized tax system.
- c. The states could use indirect taxes, both excises (including energy taxes) and general sales taxes. In the case of the latter, state sales taxes might be single-staged for administrative and compliance reasons. The use of a VAT at the state level, either alone or jointly with the federal government, could create administrative difficulties. The existence of a VAT at the federal level makes it easier to administer a harmonized retail stage tax at the state level simultaneously. Payroll taxes could be used by the states. Property taxes are ideally suited for local revenues, though the state government may well have a role in assessment and in equalizing municipal revenues. User charges are also a good

source of state and local revenue.

- d. Resource taxes are an interesting case. Efficiency considerations would make them suitable for state use since they are immobile. However, in many countries, resource tax bases are very unevenly distributed so fiscal inefficiencies and inequities can arise from their assignment to state governments. In these circumstances, federal assignment would be desired. If some or all resource taxes are assigned to the states, it is important that the federal government implement a system of overarching equalizing transfers as discussed below which includes state resource taxes.
- e. Tax harmonization and coordination are important objectives of tax policy. They contribute to the efficiency of the internal common market, reduce collection and compliance costs and help to achieve national standards of equity. Tax harmonization may be horizontal (among states) as well as vertical (between the federal government and the states). In the case of tax bases jointly occupied by the federal government and the states, harmonization can be achieved without sacrificing state fiscal responsibility by having a single centralized collection procedure combined with the ability of the states to decide on their own tax rates. Such vertical harmonization can be of varying degrees. The states may simply be required to abide by the federal base, but be allowed to impose their own rate structures. Or they may be required to abide by the federal rate structure and only be allowed to choose their own rate levels and possible schedules of credits. Fiscal responsibility would require that they at least be able to set their own rate levels. A formula must exist for allocating tax bases among states for those who are taxpayers in more than one state.
- f. It is rather more difficult to harmonize indirect taxes than to harmonize direct taxes. On the other hand, harmonization of indirect taxes is not nearly as pressing a need since the efficiency costs of decentralized indirect tax systems is not likely to be high and equity objectives are not likely to be threatened. Since state sales taxes should be single-staged, it will not be possible to operate a joint federal-state VAT system. The best that can be done is to adopt a common base for the state sales tax as for the federal VAT and jointly administer them. If the states alone operate general sales taxes, their bases could be harmonized by agreement. If left uncoordinated, some harmonization will occur naturally through inter-state tax competition. The same may be said for selective excises. Large differentials in rates will give rise to cross-border shopping problems.
- g. Tax sharing schemes in which the revenues from a federally-administered tax source is shared in a given way with the states of origin may be used to address fiscal gaps at the state level. These have the advantage that the tax system

remains highly harmonized. However, they have the significant disadvantage that no fiscal responsibility is assumed by the states. It is generally preferable for the states to be allowed to set their own rates within an otherwise harmonized system. If revenue sharing is used, it is preferable that it not be done on a tax-by-tax basis.

3. Conditional Grants

- a. The traditional argument for conditional grants is to address the problem of spillovers across states. These can occur because the benefits of public spending can spill over directly to residents of neighboring states, or because persons are mobile across states. For this purpose, matching grants are useful.
- b. Perhaps more important is the use of federal-state conditional grants as a means by which the federal government can achieve national efficiency and equity objectives while at the same time allowing the states to deliver public services. These need not be matching grants. The federal government can provide funds to the states for uses in general areas conditional on the programs in those areas satisfying certain fairly general minimum national standards. For efficiency of the internal common market, state programs may have to be portable across states so that internal migration is not distorted. In the case of education and training programs, a common curriculum and set of qualifications could be adopted. For equity purposes, state public services might have to satisfy general accessibility or comprehensiveness criteria. As in the case of tax harmonization, the use of conditional grants enables the federation to simultaneously achieve the benefits of decentralization while satisfying national efficiency and equity objectives. Conditional bloc grants with general criteria is the most appropriate form of such grants.
- c. Grants should be allocated using formulas which are both transparent and predictable, rather than ad hoc and discretionary. In some countries, there are an incredibly large number of specific grant programs. For many of these, program objectives are either not specified or specified vaguely. They may be used largely for political objectives rather than in the pursuit of key national objectives.

4. Equalizing Transfers

- a. In a decentralized federation, different states will have different abilities to deliver comparable sets of services at comparable tax rates. This gives rise to fiscal inefficiencies and fiscal inequities within the federation, and these will

be greater the greater the degree of decentralization. The elimination of these differential net fiscal benefits (NFBs) will require a set of equalizing transfers. The overall effect of eliminating these NFBs will be equivalent to having a federation which has the potential of replicating a unitary state from a financial point of view, but which achieves the benefits of decentralization.

- b. To achieve this purpose, it is extremely important that the structure of the equalizing transfers not interfere with the incentive for states to provide goods and services or to impose taxes. An ideal transfer system is one which eliminates NFB differences by transfers to a state based on fiscal capacity relative to the national average and not on actual fiscal effort or performance by the state. The simplest formula is one which equalizes state tax capacities defined by applying a set of national average tax rates to all of the state tax bases. It is desirable that all tax sources be included and that a national average norm be used. The equalization system could also include differences in need or cost where these are important considerations, though these would be more difficult to implement.
- c. The equalization system could be organized as an explicitly inter-state scheme in which the better-off states contribute to the less-well-off states. This might be regarded as a good system since it creates the ability of the states to negotiate their own scheme. The disadvantage is that the better-off states have no financial incentive to participate. The alternative is for the system to be imposed by the federal government. A problem with this solution is that the federal government may find it difficult to extract negative equalization funds from the better-off states. This can be overcome by combining the equalization scheme with a more general revenue-sharing scheme in which the federal government collects more revenues than it needs and transfers to each state an equal per capita amount plus that state's equalization entitlement, positive or negative.

5. Institutional Considerations

- a. The structure of federal-state fiscal relations, especially the system of grants, must be determined by some body. There are three main alternatives. The first is for the federal government alone to decide on it. This has the distinct disadvantage of biasing the system towards a centralized outcome when one of the objectives of the exercise is to achieve as much decentralization as possible. The second is to set up a quasi-independent body, such as a grants commission, whose purpose is to design and reform the system. These commissions have proven to be ineffective in some countries, largely because many of their

recommendations have been ignored by the politicians and not implemented. The third alternative is to use federal-provincial committees to negotiate the terms of the system. This system allows for explicit political input from the jurisdictions involved.

- b. A case can be made for loosening the constraints of the central planning process in developing countries. Central plans tend to lead to a centralization of authority, and a reduction in flexibility and autonomy at the local level. Too much discretion from above can lead to delays in private sector activity as well as to less innovation and competition at the state level. It is the antithesis of the sort of fiscal decentralization we are advocating.
- c. Finally, on a more specific point, as fiscal responsibility is decentralized to the state and local levels, it would be beneficial to create the institutional capacity for local borrowing so that more reliance is placed on borrowing and less on capital grants to finance capital projects.

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